

FAR EASTERN ECONOMIC REVIEW

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OUTLOOK FOR 1949

The *Far Eastern Economic Review* has entered upon its third year. For two years and three months it has witnessed and attempted to tell the world of the economic life and the political background of the Far East from Malaya to Japan and in the coming year it will depict in greater fullness the outlines of the picture in the diverse territories of South East Asia.

Hitherto the web of its reviews has been mainly woven around the Colony of Hong Kong and the economic activities which radiate from this unique entrepot of trade which has been almost the sole centre of stability in the midst of surging political and social changes.

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The economic present and future of the Far East are inextricably bound up with their political background. The economic prosperity and stability of Hong Kong as of Malaya and Singapore are due not only to their strategic geographical position but also to their heritage from the British Empire. The essence of our Empire like that of the Romans has been the love of order, the development and maintenance of the rule of law. Using the term "empire" in this sense, one is bound to recognise and admit that there may be worse possibilities for Hong Kong and Singapore than to have order assured by the presence of an "imperial" government itself dependent on and guided by a responsible Parliament and inspired by the kind of ideas by which the development of the British Empire has for so long now been inspired. As Sir Arthur Salter recently said "there are worse things than to be a colony

and there is no great advantage in being dissociated from an imperial power and then having it replaced by an internal tyrant or by the invasion of another power inspired by very different traditions."

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China is going through a process of the revolutionary transfer of political and social power. The Communist wave that spread like the tremors of an earthquake after the Communist Revolution in Russia in 1917—first through Persia and Afghanistan to Java and Canton in 1926 whence Borodin combining his campaign with that of the rising Chinese Fraternalist movement under Chiang Kai-shek, has now swept

with irresistible force over Manchuria and is threatening the whole of China north of the Yangtse.

China has seen revolutions before, but the shock caused by Communism and its formidable missionary elements planted in cells throughout the body politic is something unprecedented. The Communist movement in China is made up of many elements. It certainly derives the inspiration of its most prominent leaders from Russia, but it is also strongly Chinese in its political opposition to Chiang Kai-shek and the Kuomintang regime—both having outlived their original purpose and effectiveness and now having lost the confidence of the people at large. To a great extent it is a

movement of the peasants whose lot was not advanced by the revolution of 1926; it also, as General Smuts said, appeals to the intelligentsia, as well as to the cynics and diffidants who find in criticism an outlet for their intellectual discontent; it also gives a fresh start and the chance of leadership in a world where everything is pulled down to the lowest level. In other words it thrives upon the mental and social wreckage resulting from two world wars.

The main danger of the sweep of Communism over the Far East is not its economic and social effect—which may become diffused in space and time and through the conservative resistance of the Chinese peasant, but its potentiality as a cause of another world war. The irrepressible urge of the Russian people for over a century alike under Czar and Commissar towards the warm waters of the Pacific and the Manchurian ports tend to bring Russia into conflict with the American strategic defence line stretching from the Aleutians through Japan to the Philippines. Russia with its five thousand mile common frontier with China sees the importance of depriving America of its foothold on the Asiatic continent in Korea and China, and of building up a barrier or sympathetic buffer state in China strongly impregnated with the Communist ideological serum. The world watches the two most potent powers of the world today—both wholly or mainly out of Europe—each with its ring of adherents or associated powers—preparing for a final knock out contest for the hegemony of the world. In the meantime the civil war and social revolution in China threatens to involve these two great blocs in conflict.

The prospect, however, is that such a conflict is by no means inevitable. The Communists appear to have little difficulty in their way to occupy North China north of the Yangtse. For tactical purposes, irrespective of any ultimate strategical objective, they may well have to pause in order to absorb the armies of the north and to administer for the first time the urban centres of Peking, Tientsin, Nanking and the metropolis of Shanghai. Thus the vastness of the terrain which balked the Japanese, the conservatism of the people, the problems of administration, the struggle between the nationalist motive and the Communist creed, and the time element may soften and dilute the rigours of the movement. South of the Yangtse the provincial warlords at the head of famous fighting peoples from

Szechuan to Fukien who have been unwilling to fight for Chiang Kai-shek will sink their differences and oppose Communism with all the financial backing of the overseas Chinese who hail mainly from the South.

It appears obvious now that talks are going on and that when the Communists have thoroughly overthrown Ciang's Government and occupied the principal towns north of the Yangtse a political unification is inevitable through consent taking institutional shape in some kind of co-operative union. The leaders of the Kuomintang armies may go over quietly when no further purpose can be served by fighting and the Chinese genius of compromise and toleration and the political indifference of the peasant who is the backbone of China may be trusted to take a middle course and to avoid the settlement of the issue by force.

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What is the position of Hong Kong in this revolutionary movement? It is imperative that it should stand aside; it must not take part politically with either side. It has a role to

play along with the other elements in the Far East of the British Empire, or Commonwealth as it is now termed, whose life blood is the love of order and the upholding of free institutions. We may have lost most of our wealth and other forms of material power but as Arnold Toynbee points out "we have not lost our gifts for compromise, for steering the middle course, for finding ways out of difficult situations that are not drastic extreme ways."

Hong Kong can play a fine part in helping to avoid disaster in giving asylum to refugees of both sides, and in maintaining the life stream of trade which may soon, we hope and optimistically believe, flow once again—and that ere long—through the great arteries of China.

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In this hopeful and optimistic vein we wish our readers a New Year that may bring us nearer to peace and prosperity—which we can attain if only we can have the spirit to defy the bogey of war and to recognise that with work and honest endeavour we can still be the makers of our own future.

CHINA AND JAPAN ON THE THRESHOLD OF 1949

While the retrospect of China for the past twelve months was depressing Japan's record in 1948 has been one of progress in internal rehabilitation and external appreciation. The periodic reports by General MacArthur may have sounded often too optimistic and enthusiastic however they were accepted as true presentations of prevailing conditions in postwar Japan, a country which has spectacularly advanced on the road towards reconstruction and prosperity under the guidance of SCAP and the benevolent support of the U.S.A.

On the other hand, the chaotic conditions in China have been strongly castigated by impartial and even most pro-Nanking observers in Washington, London and other international capitals. Retrogression and deterioration were witnessed in all parts of China, under Kuomintang and under Kungchuantang (Chinese Communist Party) control; the depredations of the large-scale civil war cannot be expected to be undone for a generation to come.

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In Japan, during 1948, there has been continuous progress in rehabilitation of production and commerce; the index for manufacturing industries has moved up in every group and general satisfaction could not be concealed. Private trade is on its way to resume positions as held in prewar years in spite of a host of difficulties which are, largely, the result of the general dislocations following the end of war and the growing predominance of the U.S. and other industrial nations in a shrinking though very unequal world.

As Japanese industries were once again turning out the goods for which foreign markets showed unflagging interest, and at the same time assurances by SCAP regarding the thorough democratisation of the Japanese nation were made known and accepted abroad, the prestige of Japan in the concert of nations increased greatly and today she is respected and, in some quarters, again feared for her latent strength and her industrial potential. The resuscitation of Japan in so short a time and after an exhaustive and destructive war of almost nine years is indeed remarkable; but so is the natural resilience, industriousness, frugality, discipline and, as far as a considerable percentage of the people are concerned, the industrial intelligence of the Japanese.

The wise policy of the U.S. Government has effectively aided a country which helped itself, and by doing so the American people have made a friend out of a former enemy and they have further obtained the fullest satisfaction that the U.S. taxpayer's money, for once, was not wasted but indeed well invested, an investment which will bear interest far beyond the hopes entertained in Washington when the course of action vis-a-vis Japan was adopted. Aggravated relationships between the capitalist countries, for whom the U.S. became the most uncompromising spokesman and principal defender, and the USSR and the Communist nations of Eastern Europe had tended to speed up the American programme of rehabilitating Japan. However, even without the "cold war" created stimulus the U.S. would have embarked on the same policy, that is, the active assistance to a Japan willing and capable to help itself.

Law and order prevail in Japan and the security of the individual is assured; conditions of severe austerity prevail and there will be no great improvement of living conditions for the citizen in 1949 but the people are sufficiently stoical and patriotic to do without the material blessings of life knowing that after this period of trial and great national effort the results will not long be incoming, among which will be not only an advanced standard of living for the people generally but also the fullest and undivided recognition of Japan as a heroic nation by the world at large; and who knows the Japanese will appreciate that, materialistic as all human beings are, the people treasure there nothing higher than national prestige, honour and dignity. In their hour of defeat and unconditional surrender, the virtues of the Japanese people have stood the test of all time, and they now emerge fully restored to their rightful place and morally reinstated among the comity of nations.

What war-inspired hatred and prejudice still linger on will soon be forgotten: except for a faction in the Philippines which harbour ill-will, caused by the Japanese army's destructions in the course of invasion and later defence against the liberation of the Islands by the U.S. forces, and a small number of professional politicians in China, more intent on deriving personal benefits from further Japanese recompensations than to defend the so-called

rights of their country, there is now little if any hostility shown against Japan.

However, the old apprehensions lest Japan grow too strong and thus upset the equilibrium of nations in the Pacific and the whole of Asia seem to be felt again thus testifying to the success of Japan's industrial and commercial rehabilitation in 1948. If the world is to believe the reports and well-founded opinions of SCAP—and there is of course no reason to deny the Occupation authorities our trust—then it appears most improbable that a democratic and prosperous Japan, demilitarised as no other nation in the world and pledged, in their Constitution, to a renunciation of war for ever, will become an aggressor. Nevertheless, economically weaker and inferior nations will continue to express some fears and they may thus create an unpropitious atmosphere for Japan.

During the last few months of 1948, American policy in Japan hardened and assumed, for the future of Japan's industries and trade, an increasingly favourable direction with little attention paid to weak attempts at interposition coming from Nanking and Manila. Significantly enough the Government of the USSR is supporting the economic rehabilitation of Japan and welcomes every effort made by the Japanese people and the world at large to re-create a strong peace-time industry and to increase the standard of living of the Japanese to its maximum; but Moscow finds or believes to find some reasons for objection to an alleged American policy of re-arming Japan for no other possible event than to wage war on the Soviet people. As long as the East-West differences continue, especially at the present acute and hostile stage, one cannot expect the silent approval of Moscow to any American proposal or line of action; objections and obstructions are part of the political play. It is true that some U.S. military and naval spokesmen aver that Japan must be built up as America's unsinkable aircraft carrier in the Pacific, that whoever controls Japan can enforce his will over all of East Asia, that the disarmament of Japan was a grave mistake and that the whole-war in the Pacific could have been avoided by a different American policy in Asia; but these views do not carry too much weight with either the U.S. Administration or the American people.

The latest effort on the part of SCAP is the "Economic Stabilisation

"Programme" which is to be realised this year; it aims at the further and very energetic expansion of Japan's heavy and light industries and the eventual balance of trade and international payments. One of the principal reasons given for the ESP drafting was the necessity to alleviate the drain on the U.S. resources although further substantial grants by various U.S. authorities and agencies will continue in 1949, probably even increase in value, while at the same time private investments in Japanese industry and trade receive especial attention, protection and encouragement by SCAP and the U.S. Government. Another objective of the ESP is the "strengthening of the Japanese economy."

Peace treaty or no peace treaty, Japan in 1949 will resume her relations with foreign countries, step by step, by sending again her traders abroad, establish branch offices of export-import houses in principal foreign commercial centres, obtain facilities to have her young men and women enrol in foreign schools, to participate in scientific research and to contribute to the advance of learning. The world stands to gain much in 1949 from the magnificent recovery effort staged by Japan and so effectively aided by the resources and the good will of the American people. It will be particularly the countries in Asia which should be able to improve both their exports of raw materials to Japan and their imports of Japanese manufactured goods, thus enhancing the prosperity in their respective territories. Increased Japanese production and commerce mean, in this year, an important contribution to the easing of tensions and to the pacification of the restless masses in Asia.

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Unfortunately for the Far East and for a considerable part of the world, China cannot as yet be expected to emerge from the present chaos and to contribute her share to the progress of mankind. The history of the last two years in China is bleak and distressful. There appears no early promise for change. It is most invidious to forecast continued depression.

Not until the two parts of China which now are warring "to the bitter end" are re-united and an administration is wielding power over all China Proper, recognised by the world at large and worthy of international trust, can conditions change for the better. Even then the problems facing an honestly and efficiently governed China are, in

view of the consequences of the current calamity and the economic backwardness of the nation as such, of formidable magnitude and can never be attempted to be tackled unless foreign assistance on a generous scale is forthcoming.

It is much too early to discuss at the present stage of civil war and progressive attrition the problems of the future when, as cannot be expected for 1949, there should emerge, by compromise and conciliation, a truly democratic government. The best which may be hoped for now is an armed truce, with both Parties—the KMT and the KCT (CCP)—entering into an uneasy coalition to be broken as soon as conditions, for either party, warrant it. The two belligerent parties will adhere to the principle of *uti possidetis*, and it depends at present, prior to negotiations for the realisation of an armistice (called so often misleadingly "peace"), whether the Communist led People's Liberation armies are content with the territories presently controlled or are desirous of extending their realm by further offensives.

Although the political situation in China is more than ripe for an armistice, though temporary, the civil war, on and off since 1927, has created in its protagonists a mentality which is entirely removed from the common people. However, the state of national attrition has so far advanced that protracted war-making appears beyond the physical endurance of both contestants for the rule of China and her people. Thus an armistice may some time in 1949 end, for the time being, the internece slaughter.

The ensuing period will still not encourage any hopes for an improvement in the national economy as the final solution of the contest has to be awaited; this might quite probably be the domination of the Kungchuantang, at first masked by a democratic coalition government in which the various liberal movements and the leftist and oppositional KMT would participate only to be committed eventually to China's political limbo.

Looking into the future, beyond 1949, the unification of China Proper under a Communist controlled or composed government is to be considered. Provided that by the time when such contingency should arise the world powers have not composed their differences or the rift has even widened, the supposedly "red" China would have, *nolens volens*, to rotate in the Soviet orbit. It is often surmised that the Chinese Communists might, in case of full success in their

country, adopt a different course and abstain from following Moscow. This is a very unrealistic and politically uneducated view; Communism is distinguished, among other things, for its singleness of purpose in the pursuit of its goal.

In case of the outbreak of a world-wide conflict other stakes than China are of supreme importance, and the decision for the outcome of this future world war III, if it is at all realisable in the military field, is of course to be enforced in Europe. China cannot play any significant role in a future war, either actively or passively. From a merely combat point of view she is much more a liability than an asset. China's present and near-future industrial potential is negligible and therefore she does not rank as a military power of any significance in the modern world.

What the people in the Far East are concerned with is the immediate outlook for business and prosperity, and seeing that the civil war in China continues, disbelieving the interminable rumours about "peace", they are most unwillingly arriving at the conclusion that the importance of China as a trading partner is bound to depreciate further. That means less business as the impoverished Chinese people cannot continue buying foreign goods at the current already very reduced scale, and their exports will equally not improve above the current level. Over-all declines must be anticipated.

From any foreign trader's point of view the prospects of China trade in 1949 are dismal. Production declines, in agriculture and manufacturing, are continually reported, communications deteriorate through lack of maintenance, sabotage or war operations, monetary inflation upsets ordinary working, the Government is trying to control but cannot enforce its regulations—which, incidentally, are usually conceived in utter ignorance and therefore meet the passive resistance of merchants—and graft, extortion and civic insecurity are rampant. By the end of last year the exchange rate for one US\$ reached 509 million Chinese national dollars and the Government is unable to establish a budget even for 3 months.

In Communist ruled North China and Manchuria there is biblical poverty but efforts at increase of domestic production were partly successful and the common people, especially the farmers, are supporting the new regime. Without foreign assistance and foreign trade this vast area under Communist ad-

ministration must remain as undeveloped as it is today. There are rich natural resources and mining and manufacturing establishments but the new rulers have not at their disposal the necessary number of technicians and experts, nor can they as yet obtain raw materials from abroad for the operation of their factories. Commercial intercourse with "red" China will of course start in due time but it will be on a strictly reciprocal basis, at first barter later, when foreign exchange rates can be established, cash and no credits. The "benevolent energies" of other nations (to speak with Gen. MacArthur) will not be at the command of the authorities and traders of North China and Manchuria.

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The basic problems of China have to be tackled if a real improvement is to be achieved—"red" China, "white" China or two Chinas. Primarily the dilemma is the enormous overpopulation and the lack of education in the country. Unless the demographic pressure can be radically lowered, i.e. by birth control and drastic application of eugenic principles, the misery of China knows no end. To spread education the ancient way of writing has to be simplified or altogether abandoned. A new generation of capable and

honest administrators has to be brought up to replace the utterly corrupt and inefficient, though often very scholarly, officials of today. Political and administrative leadership is a problem in China which almost defies solution but without it the nation cannot recover. The type of civilisation one encounters in "modern" China is centuries behind the West; feudal and medieval is the composition of the society in China in the 20th century and only recently are changes taking place in the so-called liberated areas in the north. Another and very vital impediment to national progress is the very large percentage of congenitally inferior stock among the Chinese—a matter which is linked with the problem of birth control and the practice of eugenics without regard to Confucian ethical precepts. The people born in China are much more heterogeneous than the people in Europe notwithstanding the all pervading patterns of living and culture and the same character writing (but several distinct languages and dozens of principal dialects being spoken). The biological differences between the highly polished scions of mandarins—although they may represent the proper type of "old rogues" à la Lin Yutao—and the craniometrically underdeveloped and obtuse millions in the interior and

frequently also in the cities are very striking indeed. Similar but less widespread racial phenomena are also encountered in Japan. Then there are to be attacked and eradicated the faulty methods of agriculture and livestock raising with all its unsanitary and health undermining concomitants. But without the spread of education neither eugenics can be practised nor sickness prevented.

To break this vicious circle and the fatalistic inaction of the Chinese an energetic and inspired leadership is essential; the Kuomintang in years gone by promised the elevation of the Chinese people but the once idealistic movement turned swry and the core of the party, after the great Sun Yat-sen's death, disintegrated finally admitting to power a military faction. Progress was shrivelled, opportunities and foreign good will were dissipated, and the record of events after the end of the war has been sickening.

Still, rulers and ideologies pass, the people live for ever; and there is hope that there will arise in China a sufficiently large number of patriots who will rouse the people to action against their own weaknesses and faults and thus save themselves. But the leadership in East Asia will once again pass into the hands of the virile and acting Japanese.

BRITAIN'S ECONOMIC PROGRESS IN 1948

At the beginning of a year it is customary to look back on the old. This then is a report on how Britain fared economically in 1948.

It was, as facts tell, a year of solid achievement in which substantial economic progress had been made and many gains of previous years consolidated. It opened to a background of strong effort which, in the latter months of 1947, had been rapidly making good heavy losses caused by the fuel crises earlier in that unfortunate year. Then, although not taken into account in earlier previous planning, the actual coming of Marshall Aid lifted a number of early worries.

As for most countries, production is today the key to solving Britain's economic problems. Taking 1946 as the base, the official index of production for the first nine months of the year averaged 119 compared with 108 for the whole of 1947. In June and September the index touched the record rate of 124, as output in the base year 1946 was about the same as 1938. But it was in individual industries that records of progress were most apparent.

Steel has for some time been the most urgently needed of materials. Given a target of 14,500,000 tons for 1948 actual production was in the neighbourhood of 15,000,000 tons or

well over 2,000,000 tons more than in 1947—in November steel output reached an all-time record rate of 15,750,000 tons a year. Inspite of this record achievement there is still not enough steel and extensive plans are in hand to raise production still further.

Coal, while it has just failed to reach its production target of 211,000,000 tons made further progress. The combined output of deep-mined and opencast coal was about six per cent. higher than in 1947. The target would probably have been reached if there had been the desired 25,000 more miners in the pits. The most noteworthy feature of Britain's coal trade in 1948 was the resumption of exports to overseas markets. Including bunkers British coal exports last year were near the target figure of 16,000,000 tons compared with less than 5,500,000 tons in 1947.

With the main objective of reducing dollar and other imports of food British agriculture got down last year to a five-year programme which aims by 1952 to raise output to 50 per cent. above prewar. The first fruits in 1948 were encouraging, total output being above 1947 and easily some 25 per cent. greater than prewar. Expansion of production in the engineering, shipbuilding and electrical goods industries was equally good with overall output

some 20 per cent. above 1947 and including many new records. Amongst farm equipment, for instance, output of tractors was practically double that of 1947; the production of motorcars was about one-sixth greater than in 1947. Production records were also registered in the commercial vehicles and bicycle fields. At the same time Britain continued to build more than half of the world's new merchant ships.

CHINA'S COLLAPSE

Writing under the above headline the *Trade & Shipping Review*, of Sydney, one of Australia's leading commercial periodicals, states that "so far as Australia is concerned, the immediate future for China trade is dark". The journal expresses also concern for Hongkong's future prosperity.

Public opinion in Australia has never been very friendly vis-a-vis the Nanking regime and criticisms were regularly heard. Australian traders have found, together with their colleagues in other parts of the world, ample cause to express dissatisfaction about the mismanagement of national affairs by the government under Generalissimo Chiang's leadership.

Following is the Australian journal's resume of conditions in China.

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So far when China has been spoken of in the Western world, the China governed by Chiang Kai-shek has been referred to. It was an assumption that this included practically the whole of geographic China, even though the so-called Communists, under Mao Tse-tung, controlled a considerable area in the North with a population estimated at 80,000,000. The past few weeks have seen a great change in China. The fall of Mukden and the clean-up of other places, with losses to the National Government at Nanking, estimated at three quarters of a million men, followed by the Communist drive southward towards Nanking have completely altered the position. It is now estimated that Mao Tse-tung controls a population of 150,000,000 persons or one third of the total China population. Further expansion of the Communist held territory is occurring, and it is impossible to suggest where that is likely to halt.

It is natural that these events should have still further and most disastrously affected the economic position in China. It would be an exaggeration to suggest that during the past two years there had been much economic recovery in China. What may have appeared to be recovery, or towards recovery, was purely superficial. Recovery is dependent on the economic conditions of the people and principally on the rice crops. Within the territories controlled by the National Government there has been a consistent shortage of food supplies. Trade has been controlled by the blackmarket, involved in which was a legion of Government officials. Corruption was rampant, and owing to the weakness of the head of the Government impossible to restrain. Immense amounts of Chinese money have been flowing into Hongkong through "black" channels. As Mr. Marshall has stated, American aid to China has failed to produce the results hoped for, because so much of it was never used for the purposes intended. In regard to supplies of arms Mr. Marshall said that it was notorious that large quantities sent to the National Government had found their way into the hands of the so-called Communists to be used against the National Government. This position had been made worse by the huge quantities of American supplies, which have fallen into the hands of the enemies of the Government at Mukden and elsewhere.

Economically the position is greatly worsened since the great drive from the North began. This is exemplified by the rise in the price of rice at Shanghai by 3000 per cent. in a day.

President and Generalissimo Chiang Kai-shek has stated that unless the United States sends more and immediate help the position of the Government and its supporters will be desperate. Mr. Marshall is not inclined to throw good supplies after bad. Indeed, the United States has itself largely to blame. Ever since Mr. Roosevelt removed the late General

What a year! It is little wonder that businessmen eye the future with some misgiving.

Political disintegration in China taking a more definite form as the months go on; extravagant control measures which have tended to stifle trade; the lack of planned development in most parts of China; the unsound currency, pursuing its apparently endless downward path and reflected in the astronomical figures of the Budget, which is revised every three months and now can no longer be published. All this, and more, has tended to give an extremely gloomy picture.

Now the steadily advancing armies of the Communists present an added uncertainty as to what trading prospects may be like under a possible new regime.

Meanwhile foreigners find themselves under fire on both sides. Tientsin is threatened and its port in danger of falling. Perhaps because of this threat and the need felt for evacuating their forces the Nationalist authorities requisitioned some ten ships owned by a foreign firm. This action has naturally increased the difficulties involved in taking supplies to Tientsin, and has likewise shown an unfortunate arbitrary attitude towards non-combatants which is not conducive to goodwill. The stacking up of around 100,000 tons of coal at Tangku awaiting shipment, is an example of the disruption prevalent.

At the same time, the tenacity of the Chinese people is an asset which, to a very large extent, counterbalances the gloomy picture envisaged. The British may be, as Napoleon suggested, "a nation of shopkeepers", but the Chinese are even more emphatically a "nation of traders". Trade they must; it is in their blood, and the trader will carry on through drought, flood, and even war. When all other means fail, barter trade develops. The result is, that where chaos could be expected, as at present under the tremendous forces now at work out in this country, there has been—soaking comparatively—remarkably little disruption of trade. It may not be trade in which foreign merchants can for the time being play much part but trade is there and a foundation exists upon which in the coming years, given a modicum of peace and stability, a new structure of trade and commerce may arise.

Hongkong watches. The contrast between a stable and an unstable government, a stable and unstable currency, a balanced and an unbalanced budget is discomforting, but enterprise by local

Stillwell, because of the latter's disagreements with Chiang, the position has deteriorated. The National Government has steadfastly refused to follow the advice of the State Department, believing that the U.S.A., whose foreign policy hinges on China, would be obliged to continue support of the Government. The day of reckoning has now arrived.

authorities has led to an encouragement of industrial projects, the transfer of cotton mills and other establishments to this port and a growing expansion in every direction which is making ready to meet the demand for goods in China. Like a spring-board, ready to get into action at the right moment, Hongkong is there.

THE PUBLIC WORKS DEPARTMENT OF HONGKONG

The Department of Public Works consists of a Headquarters and nine offices as follows: — Architectural; Buildings Ordinance; Crown Lands and Surveys; Drainage; Roads; Port Works; Transport; Valuation and Resumption; and Waterworks.

The Architectural Office is concerned with the construction, restoration, maintenance, alteration and additions of Government owned buildings (offices, flats, markets, schools, hospitals, police and fire stations, prisons, camps, crematoria, lighthouses, abatoirs, bath houses, dispensaries, latrines etc.).

The Buildings Ordinance Office is concerned with the administration of the Buildings Ordinance which controls the construction of buildings by the public. Plans of architects and builders have to be submitted for approval for rehabilitation and new construction work, demolitions, alterations and additions.

The Crown Lands and Surveys Office is putting up Crown Land for alienation either by public auction for long-term leases, or is entering into leases by private treaty, while Surveys are conducted both of the Colony and of small lots.

The Drainage Office is in charge of new work, rehabilitation and maintenance of sewers and storm water drains and anti-malarial works.

The Roads Office maintains, repairs and builds roads, bridges, quarries, public recreation grounds, dumps, channels, street lighting, etc. There are 390 miles of roads in the Colony.

The Port Works Office is concerned with building and repairs of sea walls and piers, dredging, aerodrome facilities as well as the new construction of the air field of Hongkong.

The Transport Office maintains and operates motor vehicles (cars, lorries, ambulances, cycles) for Government services.

The Valuation and Resumption Office values hereditaments in connection with resumptions of town planning development, street widening and construction, rehabilitation of buildings, purchase of properties, grants of new Crown leases etc.

The Waterworks Office is operated as a self-supporting service, description of which will be found elsewhere in this issue.

REPORT ON THE RAILWAY OF HONGKONG

Business & Operations of the British Section of the Kowloon-Canton Railway for the Financial Year 1947/1948

Although the shortage of rolling stock, machinery and equipment prevented a restoration of the services to a pre-war standard, considerable progress towards rehabilitation was made during the year April 1, 1947 to March 31, 1948.

The Railway Department also derived the full benefit from rehabilitation carried out during the eighteen months after the re-occupation which culminated in the introduction of a greatly improved train service in March, 1947. This augmented service enabled substantial increases in revenue to be made over the previous Financial Period of eleven months.

Gross and net revenue for the fiscal year 1947/48 were \$6,431,252 and \$3,128,787 respectively as against \$4,431,700 and \$2,205,311 for the period ending in March, 1947. The increases were principally due to the growth in population of the Colony and Canton and the improved train services. These factors together with the progress achieved in the economic rehabilitation of the Colony since the re-occupation resulted in the heaviest passenger traffic in the history of the Railway.

Operating Expenses in 1947/48 were \$3,302,465 compared with \$2,226,389 previously. The rise was due to additional expenditure on fuel owing to increased train mileage performed by British Section locomotives, increased expenditure on repairs and rehabilitation as materials gradually became available, and the general rise in salaries as a result of the Salaries Commission.

Rehabilitation Loan Expenditure amounted to \$1,324,336 the principal items being repairs to Beacon Hill Tunnel, relaying of track in the tunnel, new machines and hand tools, and repairs to buildings and rolling stock necessitated by enemy action.

The principal traffic feature of the year was the record number of through passengers travelling between the Colony and Chinese Territory and vice

versa. The total number conveyed, 1,908,416 was a record for the Railway being an increase of 9.64% above the previous highest in 1936.

Considerable difficulty was experienced in handling this heavy passenger traffic owing to the shortage of rolling stock, and the inadequate booking facilities at Kowloon Station. The latter inconvenience was remedied by the building of a new Booking Office which was opened in August, 1947, and enabled crowds to be booked in a much shorter period than hitherto. It was, however, not possible to alleviate the discomfort and inconvenience caused

by the shortage of rolling stock, and it is feared that very little improvement can be expected until the arrival of new coaches from Great Britain which were ordered in 1946.

There was marked improvement in running costs per train kilometre for both coal and oil burning locomotives. The cost of coal not only declined but the quality was better and more uniform than during the previous year. In addition, the maintenance of locomotives greatly improved and the increased train services resulted in a more intensive use of engines. There was a rise in the price of fuel oil, but improved maintenance and greater use of engines caused a reduction in running costs. This rise, however, reached a stage when it became necessary to consider whether it would be more economical to continue to use this fuel in

KOWLOON-CANTON RAILWAY			(BRITISH SECTION) GOODS AND PASSENGER STATISTICS		
	Monthly Average 1947	Total Jan.-June 1948	Monthly Average Jan.-June 1948	August 1948	September 1948
Passengers:					
Local	Nos.	Nos.	Nos.	Nos.	Nos.
Upward	39,281	286,172	47,695	43,407	44,686
Downward	32,139	272,218	45,370	51,257	48,590
Foreign					
Upward	84,841	659,397	103,899	111,945	105,892
Downward	73,545	576,267	96,044	92,774	88,967
Goods:	kgs.	kgs.	kgs.	kgs.	kgs.
Local					
Upward	86,840	444,905	74,151	135,650	48,090
Downward	281,832	955,440	159,240	87,315	113,785
Foreign					
Upward	10,295,866	24,152,620	4,025,437	4,247,030	5,005,020
Downward	351,000	14,223,000	2,370,500	6,275,340	3,261,910
*	*	*	*	*	*
Revenue:	H.K.\$	H.K.\$	H.K.\$	H.K.\$	H.K.\$
Passengers					
Local	65,982.58	505,681.65	84,280.27	85,615.25	78,463.90
Foreign	328,458.98	2,475,435.74	412,572.62	415,579.43	391,142.27
Goods					
Local	3,592.30	10,580.50	1,763.42	2,084.65	1,701.05
Foreign	64,250.97	162,134.65	27,022.44	29,666.75	26,230.43
Miscellaneous					
Receipts	61,539.21	264,329.05	44,054.84	43,687.87	55,093.75

HONGKONG IMMIGRATION AND EMIGRATION STATISTICS

	Monthly Average 1947	Total Jan.-June 1948	Monthly Average Jan.-June 1948	July 1948	August 1948	September 1948	October 1948	November 1948
(a) By Rail:								
Inward	73,545	576,267	96,044	78,902	92,774	88,967	126,119	93,271
Outward	84,841	659,397	109,899	96,049	111,945	105,892	127,214	90,819
Difference	-10,296	-83,130	-13,855	-17,147	-19,171	-16,925	-1,095	+ 2,452
(b) By Sea:								
Inward	48,561	351,636	58,606	55,163	63,107	58,636	65,322	66,983
Outward	44,583	341,662	56,944	54,753	54,590	62,749	66,781	64,597
Difference	+3,978	+9,974	+1,662	+410	+8,517	-4,113	-1,459	+ 2,386
(c) By Air:								
Inward	3,634	50,734	8,456	10,062	8,190	9,333	11,571	12,635
Outward	3,179	46,885	7,814	9,584	9,301	9,919	10,988	13,033
Difference	+455	+3,849	+642	+478	-1,111	-586	+ 583	-398
(d) Totals:								
Inward	125,740	978,637	163,106	144,172	164,071	156,936	203,012	172,889
Outward	132,603	1,047,942	174,657	160,386	175,836	178,560	204,983	168,449
Difference	-6,863	-69,307	-11,551	-16,259	-11,765	-21,624	-1,971	+ 4,440

place of coal, particularly as the price of the latter commodity decreased. In consequence no further conversions of locomotives from coal to oil fuel took place.

In addition, the delivery charges for fuel oil were considered excessive and it was decided that savings would accrue if the oil was collected direct from the installations. With the co-operation of the Marine Department, a Phoenix barge was converted by the Yaumati Slipway for the carriage of bunker fuel and the necessary pump and starting motor were installed by the Railway Workshops. The barge was placed in service on December 10th, and by the end of the year, savings effected had more than covered the capital value of the barge, plus all conversion and operating costs.

Chinese Railway relations

Negotiations which had been in progress over a period of two years achieved fruition when the British section secured the recognition of its ownership of three locomotives, one 65-ton break down crane, 14 machines, 27 coaches and 63 wagons which had been moved to the interior during the Japanese occupation. All were returned before the end of the year except six coaches and one locomotive on the Canton Hankow Railway. The six coaches were sold to the latter administration and negotiations were in progress, when the year ended, for the sale of the locomotive. Unfortunately the return of the rolling stock did not alleviate the overcrowding between Kowloon and Canton, as the 21 coaches returned had been operating between the two terminals under Chinese ownership throughout the year.

An agreement was also reached regarding the hire and demurrage of rolling stock. The British Section agreed to supply a quota for the through service of 20% of the coaches and wagons, the ratio being the same as the division of through receipts. Coaches and wagons in excess of the quota were paid for at the rate of \$50 per coach day, and 50 cents per ton capacity of the wagon per day increasing to \$1 per ton for delays above certain periods. This arrangement commenced from March 1st, 1948. The balance accruing to the British Section for that month was \$12,860.

In some respects the year was disappointing. It was hoped that the link established with the Canton Hankow Railway in July, 1946, would have resulted in a steadily increasing volume of goods traffic between the Colony and the interior. Unfortunately, these hopes failed to materialise owing to the continuous restrictions which were placed on imports and exports from China by the Chinese Government while the decline in the value of the Chinese dollar made normal trading difficult. In consequence there was a decline in the quantity of through goods traffic, the drop in revenue from this source being \$103,667.

A further cause for disappointment was the absence of a Working Agreement with the Chinese Section. Joint traffic working between the two Sections was carried out by adhering as closely

as possible, so far as changed circumstances would permit, to the basis of the former Working Agreement. This method necessitated an increase in correspondence and meetings between the officials of the two Sections in order to arrive at a settlement of the various difficulties which arose from time to time. An agreement was reached on most problems, but considerable time was often wasted owing to the absence of a recognised formula for dealing with situations, and the frequent necessity for referring matters to the Chinese headquarters at Hengyang before a final decision could be made.

Future Prospects

The outlook for the future is difficult to forecast. The Railway suffered heavily during the occupation and orders already placed in Great Britain for the replacement of worn-out and looted rolling stock and machinery, and materials for re-railing the track involve a capital expenditure of several million dollars. To maintain the present level of revenue may be difficult as there will undoubtedly be increased competition from river shipping resulting in a possible reduction in fares, and consequently in passenger train revenue. Air travel has already caused a decrease in the number of first class passengers, but it is hoped to speed up the passenger train service within the next few months, and this may stimulate passenger travel and off-set to a certain extent the competition from river and air.

Freight traffic would undoubtedly move in considerable quantities to and from the interior were the present restrictions removed, Chinese currency stabilised and economic conditions become more settled. There are, however, no indications of this at the moment, and the immediate prospects cannot therefore be viewed with optimism.

TRANSPORTATION

Through passenger traffic between the Colony and Chinese Territory has been heavy throughout the year, the number of passengers conveyed showing an increase of 51.67% over the previous period. Details are as follows:—

TERMINAL TRAFFIC BETWEEN KOWLOON AND CANTON

	1946/47	
	No. of Passengers	Revenue
Up	417,353	\$ 921,918
Down	526,644	1,066,709
Total	943,997	\$1,988,627
	1947/48	
	No. of Passengers	Revenue
Up	765,282	\$1,876,686
Down	788,157	1,713,238
Total	1,553,439	\$3,589,924

SECTIONAL THROUGH TRAFFIC

	1946/47	
	No. of Passengers	Revenue
Up	153,536	\$ 246,816
Down	160,725	260,042
Total	314,261	\$ 506,858
	1947/48	
	No. of Passengers	Revenue
Up	214,657	\$ 355,039
Down	140,320	227,444
Total	354,977	\$ 582,483

The increases are attributable to the population increase and the shortage of river shipping since the end of the war which has greatly reduced competition from this source. The new air service between the two cities has however affected first class travel, there having been a decline in the numbers of this class of passenger travelling by rail during the latter months of the year.

The number of local passengers increased by 371,282, the rise in revenue being \$426,189. This was due to an improvement in the local train service which was brought about by the arrival of locomotives from Great Britain, by repairs and rehabilitation to rolling stock and the gradual re-population of the New Territories. First and second class accommodation was introduced in May and proved popular, there having been a steady increase in higher class travel.

In order to combat road competition, a bus service was inaugurated on the Taipo Road in October, the fares being by agreement, the same as those charged by the Railway. This service, which is an extension of a local bus company's franchise, had the effect of greatly reducing the numerous lorries which were operating on this road at cut rates when not licensed to do so. The result has been increased Railway Traffic while the Government also received royalties from the bus company for passengers carried. Total figures for local traffic are as follows:—

	1946/47	1947/48
Passengers	596,292	967,574
Revenue	\$530,610	\$956,799

Through goods traffic decreased compared with 1946/47. Details are as follows:—

	1946-47
Up	182,923 Tons
Down	1,313 "
	184,236 Tons
Revenue	\$690,603
	1947-48
Up	104,160 Tons
Down	14,051 "
	118,211 Tons
Revenue	\$586,385

The decrease was mainly due to the gradual lessening of U.N.R.R.A. supplies and the reduction in imports and exports passing to and from the interior via Hongkong owing to the very stringent restrictions imposed by the Chinese Government. Another factor militating against normal trading was the continuous drop in the value of Chinese Currency in the course of the year. Down goods traffic increased compared with the previous year, but the tonnage was still small, being mainly confined to vegetables and farm produce. There was however some export of wood oil from the Changsha area, 2,295 tons arriving in the Colony in tank wagons.

Local goods traffic amounted to 4,008 tons only, revenue being \$32,249. This consisted principally of small consignments of farm produce conveyed to Yaumati for the various Kowloon markets.

RATES AND FARES

With the exception of a reduction in August of the first class fare from \$26.40 to \$22, all up rates and fares to the Chinese Section remained unaltered throughout the year.

Difficulties were, however, experienced over downward traffic as the rapid drop in the value of Chinese currency made frequent alterations to fares necessary. From November, 1946, all rates and fares between the two Sections have been based on the Hongkong dollar, down fares being worked out on a transaction rate at the average of the previous 15 days market rate of exchange as quoted by the Bank of China in Hongkong. The decline of the Chinese dollar, however, necessitated the Chinese Section adding a 20% surcharge to their rate in December as the depreciation was often so rapid they were unable to collect sufficient monies in terms of C.N.C. to cover the payment of their share of revenue to the British Section in Hongkong currency.

First and second class coaching stock was provided on all local trains from May 16th, and from that date the pre-war practice of issuing tickets to members of the Golf Club and first and second class monthly and season tickets at special rates was re-introduced.

OPERATIONS

There were no additions to the train service during the year, the increased service introduced in March, 1947 necessitating the use of all available rolling stock. The progress of rehabilitation and repairs however enabled various improvements to be carried out. The most important were the replacement in May of the converted wagon coaches by proper coaching stock on the trains leaving Kowloon and Canton each day at 10.05 a.m. and 4.35 p.m., and the provision of lights in all British Section coaches.

The former improvement increased the seating capacity of these trains by approximately four hundred, and had a marked effect in reducing the sale of black market tickets at Kowloon.

Considerable difficulty was experienced in the operation of goods trains. Deterioration in the condition of the wheels on U.N.R.R.A. wagons and the lack of proper wagon maintenance on the part of the Chinese Section led to a decline in their efficiency. It was necessary to introduce a strict system of examination of all rolling stock at the border before it could be permitted to run over the British Section. In addition, the absence of proper brakes, and defective couplings, necessitated special instructions being issued in September in regard to the operation of goods trains. The most important were the reduction of speed over the British Section to 20 m.p.h. and the running of goods trains at times which would eliminate their crossing fast passenger trains.

A further cause for anxiety was the lack of signal lamps and double wire signalling all of which had been looted during the occupation. No replacements were received during the year.

Communications were improved by the re-installation of telephones at both ends of Beacon Hill Tunnel, Lok Lo Ha level crossing, the cable hut at Mile 11 and No. 8 Ganghut.

The situation in regard to passengers travelling without tickets greatly improved. This was attributable to increased ticket inspections on all trains as the result of the appointment of two Ticket Inspectors in May and assistance given by the Police. Excess fares collected amounted to \$101,938, while the percentage of tickets missing in collection dropped from about 9% to 2½% which was considered very satisfactory. Despite continuous Police activity, it was not possible to stamp out completely the sale of tickets in the Black Market at Kowloon Station. Police prosecutions were many and fines heavy, but the practice persisted and it is obvious that it will not be eliminated entirely until additional rolling stock is received and there is more accommodation on trains.

The timekeeping of trains generally greatly improved although it was not possible to reach a pre-war standard of efficiency. There was, however, a continual improvement in the timekeeping of through trains over the Chinese Section as their rehabilitation progressed and numerous speed restrictions over bridges and bad sections of track were removed. These improvements had a beneficial effect on the British Section.

Eighty-two special trains were run during the year. These were mainly in connection with heavy passenger traffic during the Ching Ming Festivals, Chinese New Year and the Easter

Holidays. Rolling stock for these specials consisted of wagons converted into coaches by the provision of windows and seats.

473 goods trains were operated of which 243 were to Canton and 230 in the reverse direction.

WAY & STRUCTURES

All way and structures were maintained in as satisfactory condition as the shortage of rails and supplies permitted. The state of the track caused considerable anxiety as the rails were mostly over 30 years old, and whole sections required re-railing. No new rails were received during the year. The track in Beacon Hill Tunnel had deteriorated to such an extent that 370 lengths of new 110-lb. rails and 375 pairs of fishplates were obtained from the Chinese Ministry of Communications and the whole length of 1¼ miles was re-railed.

Owing to destruction and lack of maintenance during the war, it was found that the existing labour force was insufficient to deal with the arrears of maintenance, and at the same time, reduce the weeds and undergrowth which had been allowed to grow unchecked during the occupation. An extra gang of sixteen platelayers was therefore engaged in April, and by the end of the year most of the permanent way had been cleared of major undergrowth and weeds.

The following permanent way renewals were carried out during the year:—

1. Sleepers.	
Ordinary timber	
sleepers	3,893 pcs.
Bridge and crossing	
timbers	167 "
Concrete sleepers	
(2nd hand)	74 "
2. Ballast.	
2" Granite	1,502 cu. yds.
3. Rails.	
85-lbs. B.S. (2nd hand)	37 lengths
4. Points and Crossings.	
Crossings (new) ...	1 set
(2nd hand)	1 "
Switches (new) ...	1 "
(2nd hand)	1 "

Bridges. With the exception of the 100 feet span bridges at Taipo and Shum Chun all steel bridges on the British Section were scraped and painted with tar.

The following bridge equipment, forwarded from India, were fabricated in the Hung Hom Locomotive Yard:—

	Thro' span
1 set Callendar Hamilton ..	100 ft.
1 " U.C.R.B.	60 ft.
3 sets "	40 ft.
	Launching Nose.
1 set "	60 ft.

The Railway Piers at Kowloon and Taipo were overhauled and repaired, as many of the timber deckings and fenders had been looted during the occupation and several of the others had rotted owing to lack of maintenance.

Buildings. The camouflage on Kowloon Station building, the Clock Tower and Goods Shed was removed by sand blast from the cement gun. All the missing and damaged columns and parapets on the roof were replaced at the same time, and the clock faces in the tower were re-laid with white opal glass. A new booking office, circular in shape and considerably larger than the old one was built in the centre of the Kowloon Station concourse. A cash-shaft connecting the booking office with the accounts office was constructed in order to eliminate the necessity of transporting cash bags through the crowded compound. A public address system was installed at Kowloon Station in June, 1947, five loud speakers being erected at key points for broadcasting instructions and notices to passengers.

Two 25,000-gallon pressed steel tanks with towers were erected in the Hung Hom Yard, one for oil and the other for water. A pump-house was erected near the former and two ash pits, 60 feet long were constructed near the latter.

Two new 4-room bungalows were erected at Taipo Market and Fanling for housing Station Masters at those stations. A new hut was built at Kowloon Tong to accommodate 24 platelayers and a headmen, and four new small quarters were built at Shatin, Taipo, Taipo Market and Fanling for housing keymen. This was the first part of a two year programme to provide all keymen with family quarters. They had previously been provided with a bunk's space each. An old building near the Mechanical Engineer's Office, Hung Hom Loco Yard, was completely overhauled and used as quarters for the Locomotive Department foremen. All other native quarters in the Traffic, Locomotive and Way & Works Departments were repaired.

MECHANICAL WORKSHOPS

All locomotives, rolling stock, machinery and equipment were maintained in as good condition as their age and the shortage of tools would allow. The principal difficulty has been the shortage of machines and tools, as this affected both the cost and speed with which repairs and rehabilitation could be carried out. All the best machinery and tools were looted during the war, but twenty two new machines were received during the year, and this in conjunction with the arrival of materials from the Crown Agents has enabled considerable improvements to be made in the workshops output. Repair costs per engine, carriage and wagon were lower, and the greatly im-

proved maintenance of rolling stock also led to a lower consumption of lubricating oil.

The last six of the Austerity locomotives were received during the year. They were all coal burners equipped with fixed grates which will be replaced by rocking grates as soon as the latter arrive from the United Kingdom. The total number in service was nineteen. The position is satisfactory in so far as numbers is concerned, but the types are not the most suitable or economical for the work performed. The twelve Austerity and two small shunters which were built for war purposes in 1944, are not of modern design, but have rendered valuable service.

Carriages and wagons. General repairs and overhauls were given to eighteen carriages and twenty wagons, while the arrival of some lighting sets from Great Britain combined with old equipment which was repaired in the workshops enabled lights to be re-installed in all British Section coaches. Fans were also re-installed in all first and second class rolling stock.

The former Canton Belle and Taipo motor coaches were converted into first and second class composite carriages and used on the local service. The Japanese had removed parts of the motors during the war, and the manufacturers were unable to supply replacements. A Railway Motor Bus was built in the workshops by joining two Dodge Motor Truck chassis together. The Bus could be operated from either end and was used as a shuttle service to and from the New Territories.

The Railway steam cranes were in constant use during the year. Revenue earned by the cranes from work performed in loading and unloading cargo on behalf of commercial firms, Chinese Government and other Government Departments was \$42,662.

Considerable work was carried out in the workshops on behalf of other Government Departments and organizations.

SUMMARY

	1947/48
Gauge	4' 8½"
Route Kilometrage —Operated	36
Gross Railway Receipts ..\$	6,431,252
Railway Working Expenditure ..\$	3,302,465
Net Operating Revenue ..\$	3,128,787
Percentage of Railway Working Expenditure to Gross Railway Receipts ..%	51.35
Capital Expenditure ..\$	21,298,081
Percentage of Net Operating Revenue to Capital Expenditure ..%	14.69

Gross Railway Receipts per route kilometre operated ..\$	178,646
Railway Working Expenditure per route kilometre operated ..\$	91,735
Passenger Receipts:	
(a) Local Traffic ..\$	969,850
(b) Through Traffic ..\$	4,326,842
(c) Total Traffic ..\$	5,296,692
Percentage of Passenger Receipts to gross Railway Receipts ..%	82.36
Number of Passenger Journeys:	
(a) Local Traffic	967,574
(b) Through Traffic	1,908,416
(c) Total Traffic	2,875,990
Goods Receipts:	
(a) Local Traffic ..\$	33,106
(b) Through Traffic ..\$	600,735
(c) Total Traffic ..\$	633,841
Percentage of Goods Receipts to Gross Railway Receipts ..%	9.86
Tons of Goods Hauled	122,219
Revenue from other Sources	\$ 500,719
Percentage of Revenue from Other Sources to Gross Railway Receipts ..%	7.78

HONGKONG WIRE NAIL INDUSTRY

Besides a number of small workshops turning out wire nails there are four larger factories operating in the Colony producing monthly a total of some 10,000 drums or casks of nails containing 1 picul (133 1/3 lbs) each. Specifications are usually from one to seven inches with small lots only manufactured under one inch. Exports are directed mainly to the Philippines and Siam, the former country accounting for about 70% of total wire nail exports, buying 3 to 5" nails, while Siam usually accounts for 20% of export shipments, common specifications being 1 to 3". The rest is shipped to Singapore and Malaya. The local products have to compete with imports from Belgium, the U.K., Czechoslovakia and Japan. As however demand at present exceeds supply the local manufacturers can still charge prices in line with or even higher than imported nails. With the expected larger arrivals of Japanese made wire nails, which should sell then at considerably lower prices than at present, the current high level will have to be adjusted. Prices per picul for the sizes 1 to 4" range from \$68 to 75; under one inch about \$90 to 100.

One factory is also producing screws both for the use of carpenters and the mechanical trades, its monthly output being now around 70,000 gross, costing from 60cts. to \$3 per gross. Most export shipments are directed to the Philippines, to India and Burma.

THE HONGKONG WATERWORKS

History of Waterworks Construction and Present Position of Water Supply

By LEONARD JACKSON

(*Engineer-in-charge, Construction, Hongkong Waterworks Office*)

The Hongkong Waterworks owes its origin to Sir Hercules Robinson who, as Governor of the Colony, in 1859 offered a reward of £1,000 for a design for a water supply. Previous to that date, supplies had been limited to wells or tanks filled from the hillside streams; in fact Sir John Bowring who was Sir Hercules' immediate predecessor had actually stated that it was not the duty of the Authorities to supply the public with water any more than the necessities of life.

The award was won by a Mr. Rawling, a clerk-of-works attached to the Royal Engineers, who proposed a small impounding reservoir in the Pokfulam Valley on the south side of the Island, by which the water would be conveyed by means of a conduit, around the West end of the Island to tanks in Bonham Road, from which the town could be supplied.

The work was put in hand immediately and the first scheme was completed in 1863, but not without some financial difficulties. As a result of an imperfect estimate of the cost of materials ordered out from England and to the substitution, at the order of the Colonial Office, of cement for lime, the original estimate was considerably exceeded. This was eventually provided for in a special Ordinance—No. 12 of 1860—wherein permission was given to mortgage the water rate of two per cent. to a sum of £30,000.

Population Increase and Expansion of Waterworks

From that date to the present, the history of the Waterworks is that of a continual struggle to catch up with ever increasing demands, a struggle which, through no fault of the Waterworks Engineers, but due largely to the continuously growing demands, has hardly ever succeeded.

When Mr. Rawling prepared his scheme the population was about 90,000 but by the time the first section was complete it had already reached 125,000, and further supplies were needed. A new dam at Pokfulam upstream of the original dam was commenced soon after and finished in 1871, creating a reservoir of 66 million gallons capacity. The reconstruction of the conduit was next undertaken and completed in 1877, providing a water supply scheme capable of supplying half-a-million gallons a day continuously or a maximum of about three million gallons a day which is still in use.

This supply, however, only fed the western end of the town, and the East Point and Happy Valley areas were still dependent on the hillstreams, intakes having been built in

the Wongneichong and Tai Hang Valleys in 1871, and Blue Pool and Mint Dams built in 1874 provided a small storage. The impossibility of providing for the growing population from the small Pokfulam scheme, particularly as the centre of the town was moving eastward, led next to the development of the Tytam Valley, to the south-east of the Island.

The great Tytam Reservoirs and Peak Water Supply

The original Tytam Reservoir was completed in 1883, and by 1889 the first stage of the scheme was complete. This included the Tytam Reservoir of 312.33 m.g. storage capacity, a tunnel through to the Wongneichong Valley 2,428 yards long, followed by a conduit 5,500 yards long winding along the northern slopes of the Island to six slow sand filter beds and a service reservoir of 5.7 m.g. capacity in the Albany Valley. The total storage available was then 378.33 m.g. The population had reached 194,482. This was the first supply to be filtered and soon after the Pokfulam supply was similarly treated at the West Point Filters which were completed in 1890.

The first Peak supply was the next development. In 1891 water was pumped to parts of the Peak District, which had previously been dependent solely on wells. This was a supply to a small tank at Wanchai Gap, fed by a hydraulic ram pump from the Bowen Road Filters. A draw-off from the Bowen Road conduit was filtered in two slow sand beds and the service reservoir being at a much lower level the drive water for the rams was obtained from the discharge from the filters to the service reservoir, a portion of which was thereby pumped to the Wanchai Gap Tank. These pumps are still working as slowly and efficiently as ever but delivering to another tank at the 650 feet level only.

In 1892 a City Waterworks Distributing Scheme was completed. It was evidently then possible to supply all urban areas for in 1895 the use of wells was prohibited on Public Health grounds. In the same year the capacity of Pokfulam Reservoir was increased. By raising the overflow level by two feet, the capacity was increased by 4.4 m.g. The population had by then increased to 248,948 and further resources were required, but in the meantime this temporary measure was resorted to.

By 1897 Tytam Dam was raised nine feet which increased its capacity by 72.47 m.g. and again a further 22.2 m.g. was obtained by two feet boards. In 1899 a new reservoir was completed, the high level Wongneichong

Reservoir, with a top water level of 730 feet A.P.D. (above principle datum) and a capacity of 30.34 m.g. increased to 33.99 m.g. by the use of boards.

The storage of the Island therefore had by that time been increased to a maximum of 511.39 m.g. but still the demand was rising and when a dry year came in 1902 there was another water shortage, with all the familiar difficulties. There was the usual clamour to re-open the wells but this was strenuously opposed by the Sanitary Board. Despite this there was an outbreak of cholera and 460 cases were reported; water supply was restricted to one hour per day, and water was bought over from the Mainland in junks and pumped into three tanks on the praya.

Water Shortages and new Reservoirs

As a result of that shortage the City was saddled with one most unusual scheme, that of rider mains. In order to make best use of the available water by reducing waste it was proposed to introduce universal metering of supplies. The proposal, however, was not well received by the Chinese residents and an amazing compromise solution was reached. Certain streets in the City were to be provided with duplicate mains, one to provide metered supplies and a second, called a rider-main, was unmetered. The reason for the duplication of the mains was that the unmetered (rider main) supply could be shut off during periods when the supply had to be restricted, whereas the metered supplies were not so restricted until the storage position became much more acute. The consumers supplied from the rider mains jointly subscribed \$1,000,000 towards the cost and an extra quarter per cent. tax to cover maintenance, rather than pay for all water consumed. The scheme was commenced in 1903 and completed by 1906.

On the constructive side, however, work was commenced or pushed on for a number of new reservoirs. Two of these were in the Tytam Valley, the Bye-wash completed in 1904 and Tytam Intermediate in 1907, and in addition there was the first Kowloon Reservoir, to which reference will be made later.

The next development on the Island was a true Peak Pumping Scheme, for in 1914 the Pokfulam Road pumping station was completed, which pumped water from the West Point filters to a tank on Victoria Peak with a top water level of 1751.88 feet A.P.D., a total lift of 1292 feet. From this tank water could be distributed to all parts of the Peak residential area.

In 1917 Tytam Tuk Dam was finished, the largest and last to be built in that valley. With the completion of new slow-sand filters at Elliot in 1919, fed with raw water from Albany by means of a 12-18 inch pipe, and Eastern in 1925, supplied direct from Bowen Road conduit, the Tytam Scheme, apart from improvements and modifications was completed large-

ly as it stands to-day. At the opening of the Tytam Tuk Dam, this scheme was publicly described as one to satisfy the Colony for many years to come, for Tytam Tuk Reservoir alone doubled the total storage capacity of the Waterworks at the date of its completion. Yet before the scheme was complete new supplies were being sought and within 12 years time and in spite of the addition of the Shek Lai Pui Reservoir and the availability of the flow from the Shing Mun Intake, in 1929 the Colony, though more particularly the Island, suffered its worst water shortage.

Development of Waterworks in Kowloon

The original Kowloon supply was provided by three wells north of Yaumati with a yield of approximately 250,000 gallons per day which were brought into use in 1895. The New Territories Lease was effected in 1899 when the flag was first hoisted at Taipo on April 16 of that year. In 1901 the well supply for Kowloon was increased by 100,000 gallons per day, but no reservoir scheme being possible on the Peninsula of Kowloon, no doubt the acquisition of the New Territories enabled serious consideration to be given to possible reservoir sites in the hills immediately to the north, for in 1902 work was commenced on the original Kowloon Reservoir to be completed in 1910. This gave Kowloon a storage capacity of 352.5 m.g. with an extra 32.5 m.g. if the weir level was raised three feet with sluice boards.

Three slow-sand filter beds were also built, an extra bed being added in 1916, and two more in 1922 and a second reservoir, Shek Lai Pui, of 116 m.g. capacity was completed in 1925, together with four more filters. But by that time, as was described above, the Island was nearing the end of its resources and it became necessary to look to the Mainland for extra water. In 1923 therefore a start had been made on the Shing Mun Scheme which, by means of a cross-harbour pipe line, would supply water to the Island in addition to providing further resources for Kowloon. The first part of the scheme only provided for an intake in the Shing Mun river for the purpose of augmenting the existing supplies, until such time as the Dam could be built to provide the storage reservoir necessary to the complete scheme. The intake supply conduit and reception reservoir were completed in 1926, but the whole of this part of the Scheme was not officially opened until March 31, 1930, when water from the Shing Mun River was first delivered into the Hongkong Island distribution main. From this date, Kowloon Waterworks ceased to be an independent unit from the older City Waterworks and from that time the development has been that of a unified system.

It will be noted, therefore, that in 1929, the cross harbour connection was still not laid—in fact at the period of the height of the crisis the

Waterworks Engineer, Mr. R.M. Henderson, was in England discussing the scheme with the Consulting Engineers.

The Water Crisis of 1929

No historical note on the Hongkong Waterworks could omit mention though necessarily brief, of that desperate year. Despite the continual construction programme that has already been described, the 600,000 people on the Island in July, 1929, were only being allowed three million gallons per day from the Waterworks plus approximately one million gallons per day brought to the Island in boats, a total of 6.67 gallons per person per day. On June 20 of that year only two reservoirs on the Island had any water left—Tytam 176.8 m.g. and Tytam Bye-wash 11 m.g., a total of little over 180 m.g. or 60 days of the restricted supply. To illustrate the seriousness of such a shortage it should be noted that a minimum storage of 1,000 m.g. at the end of May is now considered essential, or that with only 10 hours supply in March this year the consumption never dropped below 10 m.g.d. and in May 6.67 m.g.d. in June, 1929. The demand in 1929 for adequate measures to be taken was, of course, fully justified, particularly as only six years before the Governor, Sir Reginald Stubbs, addressing the Legislative Council on the proposed Shing Mun Scheme had said that "whatever the sum may prove to be, I am sure that Honourable Members will agree that no price is too big to pay for the assurance of a really adequate water supply for many years to come."

That supply was still not forthcoming in 1929, and largely as a result of that shortage an entirely new scheme was commenced on the Island in the valley above Aberdeen, extensive catchwatering was carried out to augment the Island catchments, and the Shing Mun Scheme proper was expedited. The Aberdeen Reservoirs added 280 m.g. storage and were completed by 1931, as was the Bye-wash Dam in Kowloon, and the Jubilee Dam in the Shing Mun valley in 1936 which again doubled the total available storage of the waterworks, yet in 1937 and every year since, restrictions have still had to be imposed culminating in the position this year that on May 27 with but a ten-hour supply there were only 1482 m.g. left in the reservoirs, or only 61 days supply at 10 hours per day.

Current Position and Outlook for Future Supply

The position today therefore is that with thirteen reservoirs having a combined storage capacity of 5970 m.g. it is only possible to maintain a 24-hour supply during the wet season and during every dry season the supply has to be restricted, in a good year perhaps no more than a nightly shut-off from say 10 p.m. to 6 a.m. but if resources drop and demand increases even this 16-hour supply cannot be maintained.

There can only be one objective for any Waterworks Organisation, namely

a full 24-hour supply to all consumers. This unfortunately has rarely been possible in Hongkong and now is quite unattainable with the present resources. Apart altogether from the refugee influx there is the ordinary increase in population, and a greater per capita demand due to improved housing conditions.

Also, if Hongkong is to tackle the problem of universal flushing instead of the out-dated night soil disposal still in use in large areas of the Colony, there will be an additional heavy load on the Waterworks.

Alternative sources of water have of course been frequently suggested. The conversion of seawater is an obvious possibility. Unless the use of solar energy can be developed however, there is little likelihood of this method being of use. In 1927 a detailed investigation was made on the basis of oil or coal fuel and even with prices as they were then, coal at \$11.20 to \$13.20 per ton or oil at \$35 per ton, it showed that the water would cost \$2.89 per 100 gallons, as compared with the cost of water supplied by the Waterworks at that date of about 30 cents.

Sea water could also be used for flushing. This too was investigated in 1921 and again in 1927. It would be very expensive and the 1921 Committee reported as follows: "The time may come when the limit of the fresh water resources of the Colony has been so nearly reached that it will be more economical to obtain a supply of salt water than to obtain an equal additional supply of fresh water, but it does not appear that that time has yet arrived, and no works which may be carried out now for the use of fresh water will in any way interfere with the use of salt water when its use is found to be more economical."

That argument still holds good for all the various alternatives, and it still remains the basis of Waterworks policy. Other fresh water resources are still available in the Colony, and one, the Tai Lam Chung Valley Scheme has been reported on favourably by Consulting Engineers. But this scheme will take several years to complete and has not even been authorised yet. In the meantime the prospect can only be one of restrictions every winter and possibly also in summer, if consumption keeps mounting at its present rate.

To make the best possible use of the existing resources, work has already commenced on a programme of improvements designed to eliminate the shortage of filtration and service reservoir capacity, modernisation of pumping plants and improvements to the distribution systems. However, no improvements in detail will ever impress the consumer who goes to the tap to find it dry, yet this is what must be, daily, for certain periods of every year until substantial additional resources are provided, and I can only conclude by repeating Sir Reginald Stubbs' words already quoted that "whatever the sum may prove to be, no price is too big to pay for an assurance of a really adequate water supply for many years to come."

HONGKONG GAS CONSUMPTION

	Monthly Average 1947 Cubic feet	Monthly Average 1948 Cubic feet	Total Jan.-Sept. 1948 Cubic feet	October 1948 Cubic feet	November 1948 Cubic feet
Industrial & General ..	17,033,392	21,526,850	189,593,800	22,309,300	24,449,700
Public Lighting ..	1,328,567	1,758,350	16,728,400	2,288,100	2,314,100
Total	18,361,959	23,285,200	206,682,200	24,597,400	26,664,100

In October the gas consumption of industrial enterprises was 1,800,300 cubic feet, and in November 1,752,800.

HONGKONG CONSUMPTION OF ELECTRICITY

	(in Kilowatt hours)				
	Monthly Average 1947	Total Jan.-June 1948	Monthly Average Jan.-June 1948	Total Jan.-Sept. 1948	October 1948
Lighting ..	3,298,718.00	24,566,409	4,094,402	38,102,352	4,639,552
Power ..	1,244,540.71	20,566,531	3,427,755	32,202,114	4,144,863
Traction ..	631,524.50	4,391,936	731,989	6,614,780	743,580
Bulk Supply Consumers	2,340,809.42	19,755,142	3,275,857	30,544,117	4,058,540
Public Lighting	71,710.92	509,838	84,973	796,213	105,594
Total	7,587,303.55	69,689,856	11,614,976	108,259,576	13,692,129

HONGKONG POST OFFICE REVENUE

	(in H.K.\$)			
	Monthly Average 1947	Averages Jan.-June 1948	Total Jan.-Oct. 1948	November 1948
Stamps	535,529.72	638,409.33	6,531,414.00	712,548.00
Stationery	885.71	14,946.57	172,900.40	25,135.00
Postage due Labels	956.26	1,293.04	13,720.70	851.27
Receipt's Stamps (Collected on behalf of Inland Revenue Department)	87,574.43	103,104.00	1,035,144.00	118,680.00
Total	624,946.12	754,419.45	7,753,179.10	857,214.27
Index on Basis Average Monthly Receipts 1935-1939 (\$177,326.32=100) ..	352.43	425.43	463.56	483.41

COAL STOCKS OF HONGKONG

For the first eleven months of 1948; in long tons.

	Monthly Average 1947	Monthly Average Jan.-June	July	August	September	October	November
Bituminous Lump	47,185	63,277	70,668	72,239	62,583	58,967	45,908
Bituminous Dust	10,515	13,496	14,706	15,236	14,805	14,155	11,782
Anthracite Dust	7,025	3,086	5,864	6,447	4,512	4,574	3,206
Gas*	—	7,857†	4,456	6,162	6,140	4,747	4,806
Coke†	—	1,227	1,958	1,561	1,214	1,525	1,096

* Figures not available before March, 1948.
† October, 1947

‡ Monthly "Average" March-June.

HONGKONG PRODUCTION OF CEMENT

The local cement production in 1948 has greatly increased over the output of 1947 (monthly average) with the building industry of Hongkong taking everything which is turned out. The local cement producer is the Green Island Cement Co. Ltd.

Monthly average 1947	2,852
1948:	
"January"/June	4,415
July 1948	4,471
August	4,096
September	4,045
October	4,725
November	4,103

For the first six months of 1948 the total local cement production amounted to 26,492 tons, and for the first 11 months of 1948 the cement production totalled 47,932 tons. Peak production last year was reached in October which exceeded the monthly average of 1947 by 65.7%.

* * * *

HONGKONG PRODUCTION OF FLUID MILK

The dairies in the Colony, the largest and most modern one being the Dairy Farm, Ice & Cold Storage Co. Ltd., produced the following amounts of liquid milk in 1948:

	Gals.
Monthly average 1947	32,544
1948:	
"January"/June	40,437
July 1948	44,836
August	44,237
September	43,749
October	48,217
November	45,888

The increase in milk production and consumption in this year compared with 1947 is conspicuous, testifying to the higher standard of living of the population in the Colony.

The increase in milk production in October and November of last year against the 1947 monthly average amounts to respectively 48.16% and 41%.

HONGKONG'S TRADE WITH JAPAN

In line with the policy of the United States Government to stimulate Japan's trade, is the permission given to Japanese businessmen to visit other countries for commercial purposes. It is obvious that up to now Japanese merchants have been much hampered by their inability to get first-hand knowledge of the requirements of their markets, and the permission now given should lead to a marked increase in trade.

So far as Hong Kong is concerned, however, there would not seem to be much likelihood of any change in trading methods with Japan. Trade here, as is well known, is maintained on the Hong Kong Government/SCAP two-way account, with the Department of Supplies, Trade & Industry keeping an eagle eye on the credit balance in Tokyo.

For the first ten months of this year, the trade balance with Japan, as compared with 1947, was as under:—

	1948 Jan./Oct.	1947 Jan./Oct.
Imports from Japan	\$60,774,533	\$24,495,988
Exports to Japan	39,943,640	7,486,835
	<u>HK\$20,830,893</u>	<u>\$17,009,153</u>

There was consequently an excess of imports over exports of \$20.8 million, compared with the smaller unfavourable balance of \$17 million for 1947; the gap however, as explained in our issue of August 11, is partly filled by earnings from services and other invisible exports.

The total trade of Hong Kong with Japan for 1948 (January/October) amounted to \$100.7 million, as against \$31.9 million for the same period of 1947 (an increase of 215.6 per cent), or compared with a total of \$89.5 million for the whole of last year. Total imports for 1948 (Jan./Oct.) (\$80.7 million) showed an increase of 149.9

per cent. over 1947 (Jan./Oct.) (\$24 million), and total exports (\$39.9 million) for 1948 (Jan./Oct.) showed a gain of 432 per cent. over 1947 (\$7 million), the same period. Further analysis indicates that whereas imports for July/October 1947 showed a gain of 600 per cent. over those for the first half of that year, imports for July/October 1948 dropped 57 per cent. compared with January/June 1948.

Exports also showed a downward tendency for the later part of this year, for whereas an increase of 500 per cent. for July/October 1947 over January/June 1947, the increase was only 33 per cent. for July/October 1948 over January/June 1948. The figures for imports and exports follow:—

	Imports \$	1948 \$	1947 \$
January/June	42,564,196	3,397,577	
July/October	18,210,337	21,098,411	
	<u>60,774,533</u>	<u>24,495,988</u>	

	Exports \$	1948 \$	1947 \$
January/June	17,105,923	1,376,681	
July/October	22,837,717	6,110,154	
	<u>39,943,640</u>	<u>7,486,835</u>	

Raw materials are at present the greatest need in Japan. Foodstuffs, particularly soya beans, are also in demand. The following table shows the principal imports and exports which passed between Japan and Hong Kong during the ten months of 1948 ending with October:—

Imports from Japan into Hong Kong

	1948 July/ October HK\$	1948 January/ June HK\$
Textile fabrics and small wares	3,945,189	9,639,586
Raw textile materials	3,362,081	1,042,694
Products for heating, lighting and power	2,221,239	—
Chemical elements, pharmaceutical products	1,165,517	2,767,300
Non-metallic minerals	1,119,132	1,154,357
Rubber manufactures	1,040,706	681,949
Pottery and clay products	1,006,424	1,320,442
Fishery products	949,270	1,325,604
Machinery other than electrical	727,845	4,285

Exports from Hong Kong to Japan

	1948 July/ October HK\$	1948 January/ June HK\$
Oilseeds, nuts & kernels	11,081,739	6,500,000
Raw textile materials	6,026,327	3,160,780
Chemicals & pharmaceutical	1,354,976	480,905
Vegetables, etc., chiefly used for food	1,224,790	2,855,201
Animal & vegetable oils	888,560	69,412
Vehicles & transport equipment	660,454	453,108
Miscellaneous crude products	540,567	1,155,808

INTERNATIONAL TIN STUDY GROUP

At Scheveningen the third meeting of the International Tin Study Group was held. The object of the conference was to study a report issued by a working committee of the tin study group, in order to arrive at the conclusion of an international tin agreement in conformity with the general spirit and the principles of the Charter of the International Trade Organization. The tin study group decided to ask the governments of the member countries to inform them if they were willing to consider such an agreement

and if they were prepared to participate in a conference having the objective to formulate and agree upon the final treaty.

The group did not make proposals regarding an increase of the production of tin in the Far East. Nor were any world tin prices discussed, other than those coming within the framework of the proposed international agreement.

Regarding the tin situation it was pointed out that, since this metal was in great demand it would remain scarce for the time being, although it was anticipated that next year's tin output would be considerably above the 1948 level.

If indications were not deceptive, the world shortage of tin would continue until 1950. It was hoped that by that time there would be equilibrium between supply and demand.

Delegates from the following 14 member countries participated in the talks: Australia, Belgium, Bolivia, the British colonies, Canada, China, Great Britain, France, India, Italy, Netherlands, Siam, Czechoslovakia and the United States.

HONGKONG SLAUGHTERHOUSES

Animals slaughtered for the period	January to November 1948					
	Monthly		Monthly		Monthly	
	1946	1947	1948	1948	1948	1948
Cattle	2,277	3,805	2,805	28,141	4,608	4,216
Swine	22,633	37,162	44,052	402,147	47,971	43,594
Sheep and Goats	264	282	282	2,945	610	785
Total	25,174	41,249	47,139	433,233	53,189	48,595

EXCHANGE & FINANCIAL MARKETS

Gold Trading and the Gold Exchange of Hongkong

The history of the Gold and Silver Exchange Society of Hongkong dates back no more than thirty years. The Exchange was reformed in 1932 and is being governed by regulations which are amended year after year. Conservative management was responsible for its success and smoothness in conducting of trading until now. The total membership (or seats) was 260 before war but only 197 survived up to the present, the reduction having been caused by the failure of bankers' and brokers' businesses. Unlike the export-import merchants here, the Exchange was a patriotic organisation, which gave financial help to the Chinese Government when resisting the Japanese and it also ceased functioning when the Colony was occupied by the Japanese army.

An executive committee and a supervisory board control the operations of the Exchange. The present Chairman is the manager of the Hang Seng Bank and former chairmen were the respective managers of the Tat Cheong Bank, Dao Hang Bank and the Hang Shing Bank.

The status of the Exchange is neither one of a limited liability company nor one governed by special laws of Hongkong Government like Stock Exchanges; it is simply registered with the Secretary of Chinese Affairs here as a market for trading in gold, silver and all kinds of currencies.

Of all the members, only 44 are permitted to fabricate gold bars of 99% fineness and these operations are governed by regulations that each bar must be examined, approved and chopped by the examiner of the Gold Exchange.

Only about 170 members are active, and are divided into several groups, namely—gold importers such as, Hang Seng Bank, Wing Lung Bank, Cheong On, Chiu Tai Bank and Wing Hang Bank; local operators such as Dao Fang Bank, Cheong Kee Bank, Kwong On Bank, Tat Cheong Bank and Hang Shing Bank; Swatow operators such as Man Fat Bank, Man Cheong Bank, Man Lee Bank and Sing Hang Bank; Cantonese operators such as Tak Cheong, Tak Shun, Ning Nam and Tai Sing; Shanghai operators such as Ming Hing, Sun Kee and Yat Sing. The Swatow and Cantonese operators are said to be also exporters of bars to China and South East Asia ports. The Shanghai operators are said to be dealing in so-called bucket business.

The value of a membership seat was officially traded in at \$40,000 and the open market value for a membership is about the same, the highest price paid was \$45,000 and the lowest price was only about \$10,000 when Hongkong was reoccupied in August 1945.

Dividends of the Exchange are paid half-yearly. Recent dividends amount-

ed to \$3,000 per year. The assets of the Exchange are the building in Mercer Street, a bathing club and a school, which is now being organised.

Trading at the Exchange is to be carried on always in cash and no Government stamp duty for contracts is paid, but in fact the majority of transactions are for future delivery but this fictitious forward business may be regarded as for one day, a year or even centuries. The Exchange's accounts department automatically carry forward all transacted business to another day if gold has not been delivered or demanded. However, one cannot demand or deliver freely and may only ask for interest payment which is daily regulated.

For the present, trading at the Exchange is mainly in gold, piastre being only a side business, while silver and foreign currencies are traded outside. Times of trading at the Exchange are 9.30 to 12.30 a.m. and 14.30 to 16.30 p.m. on week days except holidays, and there are no afternoon sessions on Saturdays but the morning session is lengthened by half an hour.

The Exchange is fixing official business rates for its members to pay their differences at both the morning and afternoon sessions. Those who fail to pay their differences will be treated as having admitted failure and the membership will be struck off. The Exchange is also regulating that members pay deposits on every business conducted, viz., below 400 taels of gold, \$50 per tael and above 400 taels \$75. Those who fail to pay the prescribed deposit are also treated as insolvents.

Interest rates are being fixed by the Gold Exchange officially every day. These rates depend on the performance in the market, that is demand and delivery. The rate favours either buyers or sellers. The maximum interest for gold is 2 cents for every \$10 transaction value per day (computed according to the official quotations).

The Exchange charges members for handling gold business one cent per tael for buying, selling and also for carrying forward per day.

The Exchange enjoyed a prosperous year in 1948, as the local gold market was one of the few free markets of the world, and also a centre for imports and exports though these were not declared.

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SILVER MARKET

Rates abroad and locally remained unchanged and business was slack with local turnover amounting to:—108,000 taels, \$23,000 and 112,000 respectively worth of dollar and 20 cts. coins. Rates per tael \$3.90/91, per dollar coin 2.55/52, per five 20 cts. coins 1.91.

There was no platinum business reported, rates remaining nominal.

US\$ MARKET

Gold importers were showing more activity but merchant demand was small while inward remittances from overseas Chinese increased thus causing a weaker rate. Some buying of TT and notes was again noticed as coming from Shanghai sources; mostly self-exiled persons connected in one or another way with the Nanking government.

The note quotation exceeded drafts by about 1% a result of purchases from Shanghai and Amoy merchants and investors. Some larger parcels of notes were also taken off the market by importers who had to deposit them here with commercial banks for opening of Letters of Credit.

A new source of supply in an already weak US\$ market were investors who slowly try to get rid, before the rate continues to slip, of their hoards either in New York accounts or kept in US notes in their homes or safe deposit boxes of local banks. This development signified growing confidence in the stability of sterling and the anticipation of further though slow appreciation of sterling in free or unofficial exchange markets.

Last week's highest & lowest rates per US\$100 in HK\$:—notes 507—497; DD 503½—491½; TT 506½—495 (equalling US\$19.75—20.19 per HK\$100).

Local cross rates US\$3.23, high, 3.16, low. Unofficial ("disorderly") cross rates abroad ranged from 3.05 to 3.30 with Aden (another open exchange market in the sterling area) and Tangier (international zone) being above Hongkong.

Turnover in the local native market (excluding inter-merchant dealings):—TT US\$1,151,000, DD 510,000, notes 369,000, a total of US\$2,030,000.

GOLD MARKET

The pre-holiday market of last week was featureless with rates showing hardly any fluctuations. High and low \$299—294½ per tael, cross rates US\$48.75, high, 48½, low.

Spot sales aggregated inside the Exchange 1,130 taels, outside 47,610 taels; forward market transactions: 326,120 taels.

Trading Reports for the Week:

Monday, Dec. 27.—Holiday. The unofficial market was fairly active with highest and lowest transacted at \$299—298.

Tuesday, Dec. 28.—Opening & closing rates 298—296%. On the fictitious forward market the change over favoured sellers at the interest rate of 4 H.K. cents per tael a day. Throughout the week the change over rate remained in favour of sellers. The opening rate of 298 was the highest of the week under review. Market was quiet with easier undertone on reports that New York merchants were selling freely both cash and forward gold; and imported gold was arriving in Macao.

Wednesday, Dec. 29:—Opening and closing 296½—295½. Change over 9 cents. Gold importers heavily delivering their bars for cash in order to clear their accounts with their bankers for the year, thus recording the biggest turnover of cash bars of 21,000 taels in a single day.

Thursday, Dec. 30:—Opening & closing 294½—295½. Change over 6 cents. Continued heavy deliveries of cash bars by gold importers, and together with lower U.S.\$ T.T. rates, the lowest of the week 294½ touched.

Friday, Dec. 31:—Holiday. Unofficial rates were 296½—294½, only small business transacted.

Trading Position:—

Total cash bars turned over during the week under review, officially 1,130 taels and unofficially 47,610 taels. About 40,000 taels changed hands by interest hedging forward operators, 5,000 taels exported and some for local ornamental consumption.

Imports and Exports:—

Imports from Macao during the week were so small that they could not be accounted for. Detailed exports were:— Bangkok 1,500 taels, Singapore 1,500 taels, India 1,000 taels, Swatow 500 taels and Amoy also 500 taels.

For the month of December, the highest and lowest rates were 302—290½, a difference of about 4%. Total interest favoured sellers and amounted for the month to \$1.21. Calculating at the average price of 300, yield about 5% per annum.

The highest and lowest rates for the year of 1948 were 373½—283.

CHINESE CURRENCY MARKETS

Hongkong Market transactions last week (in millions of yuan):—TT Shanghai 99.1; TT and DD Canton 123.2; TT Swatow 54.3; TT Amoy 90½. Yuan spot notes 20.1 million.

Highest & lowest rates (in HK\$ per one hundred yuan):—

	High	Low	Maximum Depreciation
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notes, spot	5.35	3.30	87.6%
TT Shanghai	5.05	2.95	88.9%
TT Canton	4.45	2.92	89%

Shanghai Market rates, highest & lowest, in yuan:—

	High	Low	Maximum Appreciation
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gold per oz	8,200	5,800	720%
US note	165	118	725%
HK note	33	23½	780%

Gold crosses from 49 to 50. Hongkong note crosses from US\$19 to 20 (against the Central Bank of China's official cross rate of US\$18.75 per HK\$100).

Exchange Clearance Certificates trailed the (unofficial) market as usual as demand by importers was slack (no import licences being available in adequate numbers); against the unofficial or black market rate the Certificates quoted 15 to 20% cheaper in Shanghai, and 25 to 28% cheaper in Canton.

Canton Market quoted for HK notes from 21.75 to 31 yuan, and for TT Hongkong from 22½ to 34½ yuan. Exchange Clearance Certificates from 16 to 22.75 yuan per HK\$1.

* * * *

Canton last week transacted gold and foreign exchange business in an unrestrained manner; the official regulations are practically ignored, both by the public and by the authorities. But lip-service is to be paid to the Nanking Government and therefore unofficial rates cannot be published freely. However, there are commercial services which supply once or several times a day the unofficial quotations and also give short market reports. Among exchange shops, goldsmith shops, merchants and the general public there is no more any secret made out of so-called black market business; most shops and public places quote prices, as before August 19, in terms of HK\$ and either demand and accept HK notes or compute the price given in HK\$ into yuan at the daily (or hourly) rate. The black market of Canton has once again become a free market, in the fullest sense of the word.

Year-end rates on the free market were:—for HK notes Yuan 25.70, bank's buying, 27.40, bank's selling rate; US notes Yuan 124.65, buying, 135.08, selling (with the cross rate at HK\$4.85 to 4.93 per US\$).

As there is little demand for US notes, Canton and South China being on a "HK\$ basis," the cross rate is always lower in Canton than in Shanghai or in Hongkong. During recent months Canton quoted a highest cross of HK\$ 5.05, and a lowest of 4.60 (i.e. US\$19.80 to 21.74 per HK\$100).

* * * *

The Central Bank of China has arbitrarily established an "official" cross rate which stands at 3. Being a member of the International Monetary Fund the Central Bank is obliged to adhere to accepted official rates and should quote officially sterling at 4.02½ while it could continue operating in the black markets at the rates of the day.

Today, the Central Bank's "official" rate is lower than the black market which is a result of the illogical policy of the Nanking authorities to proclaim "fixed" rates while they inflate the currency from hour to hour. It is a matter of surprise, to say the least, that the British authorities have not remonstrated against the Central Bank of China's official underquoting of sterling; it would also have been the duty of the International Monetary Fund to take up this matter with Nanking—but nothing has happened probably because nobody wants to be bothered with financial affairs of Nanking anyway.

Last week in Hongkong the rate for TT New York went down to HK\$495 (per US\$100), in Canton and Shanghai crosses were respectively 485 and 500, but the Central Bank of China was still quoting HK\$533.33 (US\$18.75 per HK\$100).

All bankers and merchants agree that among the many preposterous acts of the Central Bank of China this is one which deserves special mention.

The Exchange Clearance Certificates, introduced as from November 21 (vide our issue Dec. 1, p. 575), prove of little interest as far as buyers are concerned. Exporters in Canton, unless they prefer to smuggle which, in fact, they do now more than at any time before, obtain from the authorised ("appointed") banks in return for their bills a Certificate which they are allowed to sell at the market rate to importers; as the trade controlling authorities (Export Import Board) do not issue an adequate amount of import licences there is naturally less demand for Certificates and the market rate is always far behind the "black" market. Thus exporters, apart from other reasons, find encouragement in smuggling their cargo out deriving the full value (less transportation charges and commissions) for their merchandise when selling abroad. Importers, who are strangled by the Export Import Board's policy of curtailing or prohibiting imports, buy export proceeds from merchants directly, although they would prefer to buy, at a discount of some 25%, the Clearance Certificates.

Last week's rates for Certificates in Canton, at the close of the year, were for HK\$: Yuan 20.625, and for US\$: Yuan 110½. The Certificates sold about 25/27% lower than HK notes, and 13/15% lower than US notes. The difference in the rate for HK and US Certificates is explained by the fact that the banks compute HK\$ into US\$ at the Central Bank of China's "official" rate plus banking commission, thus the Certificate "cross rate" stands at HK\$ 537½ per US\$100 (or US\$18.60 per HK\$100).

* * * *

Buying/selling differences for yuan notes or TT China are increasing every week; last week Hongkong money changers, refusing to be caught with a long position in yuan, took only in what they could immediately dispose of, or they bought several points under the market rate. The usual difference between buying/selling of yuan is 8 to 9% but last week even 20% margin was common. It also happened that money changers refuse to buy yuan notes, others being only sellers.

In Canton's open exchange market the difference between buying and selling of HK notes is from 5 to 10%, and of US notes from 8 to 12%. The progressive inflation and the complete loss of confidence in the yuan has brought about this development.

* * * *

Rates of interest for loans are now generally charged per day. Nobody can borrow yuan on a monthly basis. Rates fluctuate wildly, in November and December daily rates of 15% to 25% were observed. To speculate a la baisse in yuan is a most popular game; even coolies and amahs take part in it. The question is always whether the depreciation of the yuan's value in terms of gold and foreign exchange is higher or lower than the daily interest rate. The fixing of the daily rate should, over a time, match the decline in purchasing and foreign exchange value of the yuan.

If the rate is too high, i.e. the yuan does not depreciate as fast as the interest would require it, the borrowers lose; then it happens that many bankrupts close shop and remove to another city for continuation of the game. It did happen that during one day the exchange rate of the yuan went down by 25%, then reacts, closing "only" with a loss, against the preceding day, of 10%; but at the same time the daily interest rate was not so flexible and remained throughout the day at 20% resulting in gains to the lenders and losses to the borrowers. Most of the loans which are contracted in yuan are at once turned over into gold, silver, foreign currencies, commodities.

BANK NOTE MARKETS

Peso notes were on good offer at \$2.41—2.35, high & low, as Chinese returnees were bringing larger parcels for conversion into the local dollar. Most Chinese in the Philippines when making remittances to their relatives in China mail US\$ drafts (cashier's orders, manager's cheques) made payable in the U.S. and only in comparatively few cases are these drafts received here (which are sold at a discount of some 4 to 5% against the parity). It is simple to buy in Manila US\$ drafts, usually paying a commission to issuing banks there of $\frac{1}{2}$ to 1%.

Bank of England notes sold from \$15.15 to 15.20 with outport demand still strong. New York offered between 2.96 to 2.98.

Nica guilders had only small sales, amounting for the week to 176,000 guilders. High and low \$36.20—33.40. Trade with Indonesia has fallen off recently which accounts for reduced demand; on the other hand there is hope here for reinforced economic strength of especially Java once the latent danger to law and order has been removed. Speculators pay close attention to this counter. A report was circulated in the market indicating that a new note issue is under preparation in Batavia and that in due time the current Nica notes are to be recalled and new Indonesian currency is to replace it.

Piastre ruled easy with sales in the local market aggregating:—spot, inside the Exchange, 1,150,000, spot outside 3,610,000, forward 4,150,000 piastras. High and low \$7.75—7.10.

Baht notes had few sales, rates unchanged at \$25.

EXCHANGE CONTROL OVER LINEN PIECE GOODS

As from the beginning of this year the importation of linen piece goods has been put under special licence requirement and import licences will only be issued against surrender (sales at the official rate) to the Hongkong Exchange Control of 70% of US\$ equivalent of the invoice value. In respect of the country of origin being in the hard currency category the surrender requirement is 100% of the US\$ equivalent of the invoice value.

The price of linen piece goods as far as of Irish origin should now increase locally by about 17½% over December (previously £1000 import value of Irish linen equalled HK\$16,000 but now, when the open market rate stands at about HK\$5 per US\$1 and importers must surrender 70% of import value in US\$, the invoice value of £1000 corresponds to HK\$14,000 plus 4,800, making HK\$18,800).

The export price of linen made handkerchiefs, embroidery and napery should increase by 10 to 15%, depending on the amount of workers' wages

HONGKONG EXCHANGE BANKS ASSOCIATION

AGREED MERCHANT RATES

	MAXIMUM SELLING	MINIMUM BUYING
STERLING.	1/2 15/16 delivery within 2 months with a cut of 1/32 for every fur- ther 3 months forward.	1/3 1/32 T.T. 1/3 1/16 O.D. 1/3 3/32 30d/s. 1/3 1/8 60.90d/s. 1/3 5/32 120d/s.
—Do— (East & South Africa)		1/3 1/8 O/D if under L/Credit. 1/3 3/16 O/L with L/Credit 1/32nd up every 30d/s.
—Do— (West Africa & West Indies)		1/3 5/16 O/D if under L/Credit. 1/3 3/8 O/D with L/Credit. 1/32nd up every 30d/s.
RUPEES (India)	82 %	83 % T.T. 84 O/D. 84 ½ 7 & 30d/s. 84 ¼ 60d/s. 84 ¾ 80d/s. All buying rates 3/16th higher than India.
—Do— (Rangoon)	82 %	84 % O/D if under L/Credit.
—Do— (Aden)	82 %	84 ¼ O/D without L/Credit. 84 ¾ 30 & 60 d/s.
Straits \$	82 ½	53 ½ T.T. & O/D. 53 ¾ 30 & 60 days
U.S.\$ CANADIAN \$	24 15/16 delivery within 2 months with a cut of 1/16 for every fur- ther 3 months forward.	25 ¾ T.T. 25 5/16 O/D—30d/s. 25 3/8 60—90d/s
U.S.\$ NOTES		25 % (Banks to pay Insur- ance and Postage).
AUSTRALIA.	1/6 ¾	1/6 % T.T. 1/6 15/16 O/D.
NEW ZEALAND.	1/2 15/18	1/3 3/16 T.T. 1/3 ¾ O/D.

HONGKONG UNOFFICIAL EXCHANGE RATES

(In H.K. dollars)

December	Gold			Per One Hundred Chinese Yuan						U.S. Dollar				
	per tael	High	Low	Silver	Notes	T.T. Shanghai	T.T. Canton	High	Low	Note	Draft	T.T. New York	High	Low
27	299	298	3.90.		5.35	4.60	5.05	4.40	4.45	4.00	5.06	5.03	5.06 ¼	5.04 ½
28	298	296 ½	3.91		4.80	4.20	4.50	3.65	4.25	3.95	5.04	5.00	5.05	5.03
29	297	295	3.90		4.05	3.30	3.70	3.10	3.30	2.92	5.02	4.98	5.02	5.00 ½
30	296	294 ½	3.90		3.90	3.30	3.50	2.95	3.15	3.00	4.99	4.93	5.00	4.95

etc. going into the finished article. It comes, in fact, to exporters being required to surrender approx. 60% of their proceeds in New York.

The loss now to be suffered by merchants and probably workers—to some extent softened by price increases which American department stores may grant and the customers might absorb—is a result of unsound operations in the past—as with so many other commodities, linen goods merchants have been able to do larger business with the U.S. because of the existence of two sterling/dollar cross rates. When the chance to export Empire products with full or partial retention of US\$ proceeds is eliminated (by tightening up of British exchange control measures), such postwar adventitious business cannot continue to prosper and exports can only be carried on on the same proposition as exporters who surrender their proceeds to the Sterling Area \$ Pool. (Currently, the unofficial cross rate is about 20% lower than the official, i.e. US\$1 on the free market fetches 25% more sterling than at the official rate).

During 1947 and the earlier part of 1948 some reexports of Irish linen piece goods were effected to hard currency countries without the full proceeds being surrendered to the local Exchange Control. Merchants were successful to get their cargo out of the Colony by declaring it either as cotton piece goods or made up goods. Care is exercised here, however, that no Irish linen is being reexported without full surrender of proceeds irrespective of the country of destination.

Most linen imports came in the past from the U.K. (Ireland being the main producer), were processed in Swatow (embroidery, napery), to a small part also in the Colony, and exported to the U.S.A., and to a smaller extent also to Australia, the Union of South Africa etc. The US\$ Pool of the Sterling Area in London was losing a considerable amount of US\$ as a result of the free exchange market operation in Hongkong; the embroidery exporter retained the full proceeds with nothing going to the US\$ Pool although the raw material was a British product. This situation is now being amended. Exporters here and the Swatow workers (actually the foremen) will have to be satisfied with a smaller profit, alternatively the New York importers should pay an estimated 10 to 15% more than they do at present. As the U.S. market now is not in the mood to increase prices, the probable outcome of the new Exchange Control regulation will mean reduced local business.

Japan made linen piece goods are being imported by purchasing free funds in New York or by securing an allocation from Supplies, Trade & Industry Dept., Hongkong, from the Colony's two way US\$ account in Tokyo, or by purchasing in the local free market part-proceeds of Hongkong exporters to Japan (at the average premium of 15/18%). It is likely that for coarser napery more Japanese linen will be used here and in Swatow as the price in Japan is considered very cheap.

Outlook for Inflation or Deflation in Japan

The Bank of Japan note issue and current price trend indicate that there has been a definite slowing down of Japan's inflationary spiral. With the Government prosecuting a policy based upon the three principles of (1) cessation of all "deficit" lending; (2) prohibition of any wage increase liable to affect the general price level; and (3) granting of subsidies only on the basis of a balanced Budget; a further curbing of the inflation may be expected. It is probable that rationalization of enterprises will ensue.

On the other hand, expansion of credit resulting from the increase in deposit currency is becoming a noticeable feature which must be regarded as a danger-signal of inflation.

With the year drawing to a close, Bank of Japan note issue is manifesting a tendency towards rapid increase; the Y279,500 million mark having been exceeded by the end of October showing the greatest increase yet this year of Y17,400 million; excess government spending for that month totalled Y22,237 million, or nearly Y5,000 million more than the Bank of Japan note issue. This signifies the presence of a cause for an equivalent contraction, in quarters other than the Treasury and related organs, notably the city banks.

The principal factor in the heavy increase in excessive government spending was the disbursement of funds for rice purchases. The aggregate of some Y59,900 million in excess government spending during the first ten months of 1948 is actually 99.2 per cent of the aggregate note issue of some Y60,400 million. It is apparent from this that the expansion of note issue is almost entirely due to excess government spending. This tendency will worsen as the year-end is approached, as the scheduled purchases of rice in November and December amount to some Y58,000 million, to which will be added extra payments to cover the revised rice price. Taking other requirements into consideration, it is expected that the Bank of Japan note issue will be in considerable excess of the programmed maximum of Y330,000 million at the year's end.

Turning to city banks and Reconstruction Finance Bank lending, city banks' deposits are increasing at a wholesome rate as the result of the completion of readjustments by banking institutions and also a corollary to the tendency towards stabilization of prices. The swelling of government corporation deposits ensuing upon accelerated government payments is another cause of the increase. With more cash on hand, bank loans have

gained heavily, with a marked spurt since June.

A feature worthy of note is the recession of RFB lending. Of the total supply of Y101,400 million in loans, for industrial funds during the second quarter of fiscal 1948 (July-Sept.), RFB lending took up Y15,800 million, and the rest was obtained from city bank accumulations. The procedure of abnormal industrial financing through the RFB is reverting to the normal method of relying more on city banking institutions. This increased lending eased the financing situation considerably, but there has not been an increase in note issue proportionate to the rise in prices.

When the Bank of Japan note issue is corrected for real value, by applying the Consumers' Price Index, an almost invariable decline in volume is indicated; and despite the year-end spurts in issue, the real volume has contracted. This tendency is increasingly strong this year, and yet production is on the rise, so the relative increase in currency is all the more marked. Thus, it is only natural that complaints of money shortage are running high and that a number of enterprises are being forced into readjustment.

Under the circumstances, those priority industries enjoying government protection are having a breathing spell, but minor enterprises, building and contracting, pharmaceuticals, Japanese paper-making, shipbuilding, machinery and some other industries are still under an enforced shortage of money.

Ever since the big contraction in note issue brought about by the emergency currency measure of March, 1946, the increase in deposit currency exceeded, up to April, 1947, the increase in note issue. The tendency was reversed after May, 1947, continuing till about January, this year. This is indicative of the fear of sudden drops in currency value and rapid changeover from money to goods—a phenomenon characteristic of malignant inflation.

Since February, this year, there was another reversal of trend, and increase in deposit currency has led the expansion of note issue. Thus the shortage of cash has been made up by deposit currency, and coverage has been afforded, to a certain extent, for the money stringency. This has matched the slowdown of the inflationary spiral.

Here lies incipient the cause for another onslaught of inflation. When the sudden surge, subsequent to June, is recalled due caution must be exercised. This need is readily gatherable from the amount of bank bill clearances which are based on deposit currency. During the month of October, the amount of bank bills cleared reached some Y147,900 million, or Y104,300 million in excess of the aggregate transactions for 1946. This may show that a new inflationary trend may develop.

HONGKONG STOCK & SHARE MARKET

Sentiment improved during the short trading week, December 28 to December 30. Though demand was selective there was a distinct tendency to spread. With the exception of China Light Rights, offerings were in small quantities which were readily absorbed. The best gains were made on the last trading day, and were well maintained at the close. On that day Averages gained 1.20.

Total sales reported for the two and half trading days amounted to 83,062 shares of an approximate value of \$1½ millions equivalent to that of the previous week.

The better sentiment was attributable to:

- (1) Cessation of year-end liquidations;
- (2) Reports of good working results for 1948;
- (3) Daily rumours of the imminence of "Peace" between the rival factions in China; and,
- (4) Rumours that Government will relax or withdraw pressure on some local Companies.

Despite the tightening of the Communists' noose in the North rumours were current that peace had practically been concluded. Early cessation of hostilities is the cherished hope of every inhabitant of China and Hongkong. It cannot happen too soon. Yet, considering the wide gap between the ideologies of the opponents, it is inconceivable that the Communists at the height of success will concede much to their opponents. Nor is it likely that the Nationalists will forego the reigns of Government for a minor place in the new Government that might come into being.

Rumours aent possible modification of Hongkong Government's policy towards some companies probably sprang from publication of the Report of the Advisory Committee on Hotel rates, which revealed how ill-advised the original Control Order was. The fears of possible interference are still extant, and are not entirely groundless. Rumours alone can only act as temporary palliatives. They will not rectify bad times and ill-advised policies tampering with the inexorable laws of economics.

The Colony proudly boasts today of its well run Utilities. With the exception of Water, they were all the outcome of private enterprise, as distinct from Government, a veritable tribute to the foresight and faith of the early industrialists in the future growth of the Colony. They reached their present status after many vicissitudes. It was not one clear road to prosperity, and shareholders have had to take the bad with the good. The most serious setback has probably been the period of enemy occupation, during which the companies suffered extensive damage and shareholders received no returns. Except for that period the services have been maintained efficiently and have always kept abreast of the times. This was rendered possible by fresh calls of capital from time to time, and they were readily given, because every generation

since the cession of Hongkong to Britain was imbued with the same faith, as the pioneers, in the future. To meet future growth fresh calls of capital will undoubtedly be made from time to time as the exigency arises. But they will not be so readily forthcoming in face of Control or possible attempts to control charges, fares, or rate of dividend distribution.

Therefore, it behoves the Government, if it has altered its policy in this matter, to make a pronouncement to allay the public's misgivings. It is its duty to do so, and it should not falter in that duty. Because of the retention of Emergency Powers, silence in this matter is strongly deprecated.

* * * *

The Felix Ellis averages based on the closing prices of twelve representative active local stocks stood at 137 at the close of the market for the year for a net gain of 1.69 compared with the close of the preceding week. Day-by-day his averages were: Dec. 28, 135.35; Dec. 29, 135.80; Dec. 30, 137.

The High and Low for 1947 were 155.82 and 123.88 respectively. The

High for 1948 was 148.68 on February 12 and the low was 134.05 on December 10.

Business done.

Banks: H.K. Bank at 1780, 1775, 1780, 1785.

Insurance: Canton Ins. at 370; Unions at 720.

Shipping: U. Waterboats at 37.

Docks and Godowns: North Point Wharves at 7, 7½; H.K. Docks at 28, 29.

Hotels and Land: H.K. Hotel at 14.20, 14.30, 14.40, 15, 15.30; Lands at 65½; S'hai Lands at 3.80, 3.85, 3.95, 4.10, 4.05, 4; Humphreys X Rts. at 15; and Rts. at 3½, 3.10; H.K. Realities at 2.05.

Utilities: H.K. Trams at 19.60, 19.80, 20, 20.10; C. Lights (Old) at 14.20, 14, 14.10, 14.20, 14½, 14.80, 15; Lights Rts. at 6.80, 6.85, 6.90, 6.80, 6.85, 6.90, 7.10, 7, 7.10, 7.30, 7½, 7.20, 7.10; H.K. Electricity at 37, 37½, 38, 38½, 38¾; Macao Electric at 28; Telephones at 33½.

Industries: Cements at 39, 39½, 40, 40½, 41; H.K. Ropes at 19.60, 20; Dairy Farm Old at 43, 44, 45; Watsons Old at 59½, 60, 61, 61½, 62 and New at 57, 58.

Cottons: Ewos at 10½, 10¾.

Boom at the Tokyo Stock Exchange

UNDERLYING FACTORS FOR OPTIMISM

Stock market trends are supposed to indicate the general state of economy; but, in the light of the slump in business conditions, the recent briskness is an apparent contradiction. The market since October has shown a definite bullish trend. This activity is often compared with the bull market which prevailed during the January-February period this year. But there is considerable dissimilarity in the underlying factors. Three main causes contributed toward the January-February boom.

1. The manifestations of financial stability. A gleam of hope appeared on the economic horizon with the curbing of Bank of Japan note issue; increased production of basic materials such as coal, steel, and fertilizer; and the possibility of foreign investments in Japan.

2. The recurrence of disbelief in the currency. All postwar rises in stock quotations were direct corollaries of instability in the currency. At the end of 1947, Bank of Japan note issue had topped the Y200,000 million mark, while the currency reform carried out by the U.S.S.R. on December 14, 1947, gave rise to rumors that a similar reform might be effected in Japan. This stimulated the rush from money to shares.

3. The shortage of marketable stocks. At that time, the releases of decentralised combines' stocks (S.C.L.C.) were as yet inconsiderable, while new issues resulting from rehabilitation were still few. Therefore, the buying fever induced by the afore-

mentioned factors resulted in unprecedentedly high prices during the February rush.

The recent market situation is somewhat different. The general recessive trend remains unchanged, and despite the recent increase in currency circulation, there is little fear of pernicious inflation. There has been a steady increase in production of basic materials, notwithstanding the failure in some cases to attain the goals that have been set. Although there may be some delay in materialization, hopes for foreign capital investments in Japan have not altogether faded.

The readjustments necessitated by the tendency towards economic stability have become increasingly severe. Great pressure is placed upon financial and business circles by the shortage of funds and the decline of purchasing power. With taxation becoming an increasingly heavy burden, business is threatened with a depression, which is accentuated by the disappearance of black-market prosperity and high illegal prices. This "stabilization crisis" will no doubt be accentuated by rumors hinting the early establishment of a single exchange rate.

Another dissimilarity to the January-February situation is the general faith in the currency. There is a submerged distrust for paper money among the masses; but actually, the need for money is so immediate that this is reflected in the movement of goods in exchange for cash. There is no indication of a shares purchasing

trend resulting from loss of faith in the currency.

Furthermore, there has been a great increase in the amount of marketable shares. The stock market slump of August-September, this year, was the result mainly of an over-supply of stocks, which gave rise even to pleas for the easing of the pressure brought to bear upon the market by the releases of the S.C.L.C. and the vending of new issues. The tendency towards redundancy still continues.

If these were the only factors to be considered, the current bull market would be inexplicable. There must be other causes, of which the principal ones are:—

1. Modification of United States policy towards Japan. This is assumed to be supported by the easing of the Economic Power Deconcentration Law and the Anti-Monopoly Law, and the rescinding of the restricted concerns ordinance.

2. Hopes for the alleviation of controlled economy as a result of the investiture of the Yoshida Cabinet.

These favourable factors brought about a rebound in the stock market which had been extremely stagnant during August and September. But another reason which cannot be overlooked is the fact that, the "stabilization crisis" is actually a stimulant for the stock market. With the decline of blackmarket prosperity and the disappearance of the rush for commodities as was witnessed up to early this year, business has entered into a phase of readjustment, with investors increasingly wary of making commitments. The only field left open for utilization of capital is in corporation stocks. In other words, the view that future profits lie in shares investments has been gaining ground. This, then, is the invisible prop supporting the recent surge in shares transactions.

The necessity is keenly felt of prompt and formal restoration of the Stock Exchange, so that bulky transactions may be handled without difficulty and democratization of corporation stocks may be carried out. The present off-market should be discontinued.

THE COMMUNISTS AND PRIVATE PROPERTY

According to Communist official sources, a proclamation has been issued by the general in charge of operations on the Peiping-Tientsin front to the effect that the lives and property of Chinese and foreign nationals will be protected. The proclamation states: "All privately operated factories, stores, banks, warehouses, etc., will be protected against any encroachment. It is hoped that workers and employees of all trades will continue production and that all stores will do business as usual."

Government owned factories, stores, banks, etc., will be confiscated, but if the above mentioned involve private capital, the ownership rights of the persons concerned will be recognised after investigation has established their claims."

£55 MILLION TRADE WITH COMMONWEALTH

The representatives of the Supreme Commander for the Allied Powers acting in respect of Japan and the representatives of five British Commonwealth countries, formally concluded an arrangement on Nov. 9, by which trade to the minimum value of £55-million (approximately \$220-million) will be done between these countries and Japan from July 1, 1948 to June 30, 1949, representing an increase of Japan's trade with the whole sterling area (excluding Hongkong) of over three and one-half times.

The arrangement, which embraces trade through both Government and private channels, aims at maintaining an approximate balance of exports and imports in order to avoid dollar expenditure on either side.

The main goods to be exported by Japan under the arrangement are cotton textiles, which account for a minimum of over £16-million of the total minimum estimated Japanese sales of some £27½ million, industrial machinery and parts, raw silk, rolling stock, caustic soda and other chemicals, rayon, wool, and silk manufactures, paper and paper products and bunker coal.

The sterling area participants will furnish a wide range of raw materials and other goods and services to an approximate value of £23-million including raw wool, iron ore, salt, raw cotton, cereals, petroleum, rubber, tin, jute, oilseeds, wool waste, coal, hides and skins, manganese, gums and resins, and shipping services.

Its successful conclusion marks a big step forward in the re-opening and development of trade between Japan and the British and should make a valuable contribution toward the stabilizing of the Japanese economy, and also toward the prosperity and well-being of the Far Eastern and Southeast Asian area.

JANUARY TO SEPTEMBER TRADE RESULTS

During the period January to September of this year, Japan imported Y11,833-million more than she exported with total trade figures running up to Y66,294-million. The figures are based on customs revenue returns and gave Japan's exports as Y27,230-million and imports as Y39,064-million.

Compared with the same period for last year, exports increased 5.2 times and imports 3.5 times. Increases are due to the changes in the prices of commodities. The United States headed the list of Japan's customers accounting for Y9,483-million or 34 per cent of the total exports. Java came next with Y3,460-million or 12.7 per cent followed by Korea, with Y3,040-million or 11.2 per cent, and Hongkong, Y1,830-million or 6.7 per cent. Other countries followed in the order of Great Britain, Singapore and Indonesia.

In imports, the United States also headed the list with Y24,340-million

or 62 per cent of total imports. Cuba followed the United States with Y5,250-million or 13 per cent, China with Y1,110-million.

TRADE WITH SWEDEN

Sweden and Japan will exchange goods at a volume estimated at US\$ 13,000,000 during 1949, according to the terms of an understanding reached in a trade conference in Tokyo between Sweden and SCAP representatives. Trade between the two countries will be balanced at the highest practicable level during 1949. Both Sweden and Japan are required to consider the essentiality of goods imported in the light of the requirements of their respective domestic economies. It is expected that both countries will relax export-import licence restrictions, currency and other controls which might have the effect of restricting trade between them. Trade will be conducted in terms of U.S. dollars, and will be on a cash basis. However, foreign exchange will be granted freely for approved transactions.

CURRENT TRADE DEFICIT

Japan will probably pile up a \$500-million deficit in its export-import trade during the current year, largely because of heavy purchases of food abroad. The deficit of trade is not an outstanding debt, however, since it is being paid by U.S. relief and rehabilitation grants and related schemes to give the Japanese dollar credits.

Only in the second half of this year has Japan exported goods at as high a rate as during 1947. July exports brought 1948 exports to the rate of 1947 for the first time this year. However, despite a profitable private trade, a \$500-million deficit is probable.

EXPORTS TO USSR

As the first postwar exports to Soviet Russia, ten freight cars manufactured by the Niigata Rolling Stock Works were shipped from Osaka on October 5. Thirty more locomotives and 248 freight cars will be exported to Soviet Russia by March, next year, as collateral for the import to Japan of coke, coal, pig iron and pulp in accordance with the Russo-Japanese barter trade agreement.

TRADE WITH NETHERLANDS AND INDONESIA

Trade between the Netherlands, including Indonesia, and Japan will move at a volume of approximately U.S. \$93-million during the next 12 months. The new Trade Plan provides for intensified trade between the Netherlands and Japan. The financial arrangement with the Netherlands and Indonesia represents a further relaxation of trade restrictions and marks another step forward toward returning trade to normal channels. Under the

terms of the Trade Plan, Japan will obtain raw textile materials, hides and skins, foodstuffs, ores and metals, tanning material and other chemicals, crude rubber, salt, animal and vegetable products such as animal bones, and sundry other raw materials. If successful in obtaining an International Emergency Food Committee allocation, Japan may further obtain copra and palm oil.

SIAM-JAPAN BARTER

The principal products of barter will be wheels, steel manufactures and rice, amounting to US\$68 million. The drafts of the agreement including the designation of trade and finance have recently been signed in Tokyo.

The agreement will last till June 30, 1949. Japan will export to Siam about \$37,000,000 worth of products (more than a half of them include wheels and steel products) and cotton piece goods and consumer commodities. Siam will export to Japan about \$31,000,000 worth of commodities (three quarter of the total amount is rice), but the quantity of rice will depend upon International Food Committee allotment.

Besides above mentioned commodities, Siam will buy from Japan as follows:—Aluminium goods, ironware, rubber goods, chinaware, glass and glassware, paper and paper goods, chemicals, sundries.

Commodities which Siam will export to Japan are salt, cocoanut oil, tin, copra, provision, teak, rubber, sesame, herb seeds, buffalo horns and skins.

Japanese Pottery & Chinaware

Seto-mono (Seto goods) has today become synonymous in the Japanese language with chinaware. Seto is a city of pottery surrounded by mountains containing an inexhaustible amount of kaolin. Seto is nestled at ten miles distance from Nagoya with a population of 45,000. The remarkable characteristic of Seto is that about 80 per cent of the population are engaged in the pottery production.

In 1223, Seto-China became famous with its nickname "Toshiro." The originator of Seto-China is Kagemasa Kato, who came back from Nanking, after learning for five years the secret of China manufacturing. To his disappointment, he failed to find good kaolin in Japan, but at last he found superior kaolin of "Sobokai" in Seto for the first time and handed down his special art to posterity by producing the china "Ko-Seto".

The chinaware manufacturing process can be divided into four parts: (1) preparing the clay, (2) shaping, (3) colouring and glazing, (4) firing.

In preparing the clay, feldspar and two other kinds of kaolin are reduced to powder. Then with water added, they are stirred for 20 hours. Next the water is squeezed out of this mixture with a pressure machine to get the clay raw material called "Haido" in Japanese.

Following is the text of the important directive recently issued by the Allied Far Eastern Commission, permitting a resumption of Japanese trade on what is practically a pre-war footing:—

1. Japan's foreign trade should be conducted so as to foster development and a balanced growth of Japanese foreign trade to a level consistent with Japan's needs as defined by the Far Eastern Commission and to encourage an increase in Japanese exports:

2. In addition to Allied trade representatives whose entry to Japan has been or may be approved, persons in the following categories should be permitted to reside in Japan: merchants and other traders (including representatives of commercial organisations, governmental and otherwise) prepared to purchase or to make arrangement for future purchases of potential exports or to provide raw materials or other commodities which Japan must import; representatives of banks, insurance companies, airlines, shipping and other companies; representatives, companies or individuals with pre-war property interests in Japan.

3. Nothing in this policy decision is to be understood as requiring the reopening or operation of factories in Japan.

4. There should be no discrimination against any foreign trade representative or businessman in Japan and all should be accorded equality of opportunity to transact business. Accommodations should be allocated to such

persons entering Japan under the provisions of this policy decision on an impartial basis.

5. The Yen acquired by foreign traders should be useable for local expenditures in accordance with the laws and regulations enforced in Japan.

7. The Supreme Commander may impose port and service charges on foreign vessels entering Japanese ports for commercial purposes.

7. The persons referred to in Paragraph 2 should be afforded the opportunity for direct access to individual Japanese firms of their own choosing and should have the opportunity to move freely in Japan subject only to the availability of transport and accommodation.

Any regulations pertaining to participation of firms or government agencies whether Japanese or foreign in foreign trade should be non-discriminatory in character and confined to measures essential in achieving the principles and objectives set forth in this policy and should be based on the system established by and under the supervision of SCAP.

8. A foreign cable may be conducted by the Japanese government or agency up to an extent deemed by the Supreme Commander to be necessary for the achievement of the maximum export proceeds or for other purposes consistent with the principles and objectives stated in this policy.

9. An exchange rate for the Yen should be established as soon as practicable.

For manufacturing chinaware of ordinary quality, Haido is kneaded mechanically for a while. However, to make an excellent quality of chinaware, the clay is stored in a damp place from half a year to three years.

Shaping of chinaware is mainly done with a Potteis wheel which is moved by power, foot or hand. Clay is put in a plaster pattern placed on a rotating lathe, being pressed with a towel. Moved out of the pattern in 30 minutes, the clay comes out in the shape desired. After drying in the shade for one hour, the clay is given the last touch for shaping.

Other than shaping by lathe, there is a casting method. In the casting method, muddy material is poured into a plaster mold, from which the shaped ware comes out in from three to five hours.

Next the shaped clay is fired at a heat of from 600 to 700 degrees C. in an oven for some 10 hours to produce a "biscuit." The surface of the "biscuit" is painted with coloured water containing chisly cobalt oxide on its surface, and then coated all over with a glaze chiefly made of feldspar.

After the glazing, the "biscuit" is put in an oven for 40 hours. For the first 24 hours the heat within the oven is raised to about 900 to 1,000 degrees

C. During the next 10 hours the heat is increased to 1,250 degrees, after which it is again reduced to 1,000 degrees to continue for 10 hours.

After firing is discontinued, the wares are treated.

There are three kinds of ovens used in chinaware manufacturing. Noborigama (climbing oven), Maru-gama (round oven) and Tonneru-gama (tunnel oven).

Firing is the most important and difficult step in the whole process, during which minute attention is required. Chinaware manufacturing is complete when firing is finished. However excellent the shaping and painting may be, all will become null and void from an artistic point of view if the firing ends in failure.

Next difficulty is the painting. Artistic chinaware is a creation. It is not shaping or painting alone that is most important in producing artistic chinaware. It is a refined quality that the chinaware must possess as a whole.

Works produced by chinaware artists are mostly vases, bowls for tea ceremony, plaques, and daily household articles.

Chinaware produced in Seto is classified as follows: Foreign dinner sets Japanese dinner sets, electrical ware, sundry, tiles, sanitary ware, industrial and chemical ware.

JAPAN'S TRADE AND INDUSTRY

(From Our Own Correspondent)

Communism in China

The spread of Communism in China has become a matter of grave concern to us here, partly on account of China's close geographical proximity to Japan, and also because China is our largest market in the Far East.

New Exchange Rate

According to reports the rate will be fixed sometime in March or April by which time, it is hoped, the Japanese reconstruction programme will have passed its initial stage. The new rate, however, must not be based on whether Japan can make both ends meet, but on whether we can accelerate our progress towards entering the international commercial field and, at the same time, stabilise the present unsettled economic conditions in the country.

It is anticipated that the value of the yen will be comparatively high in relation to the dollar. According to a survey made by the Government, the average rate which enabled merchants to make both ends meet was yen 200 to \$1 (the old official rate) and yen 400 to \$1 (new rate).

According to the Economic Stabilization Board's survey, it takes yen 12,000 million to regulate exports and yen 6,000 million to regulate imports, or a total of yen 18,000 million. But this cannot be expected from the Government at this stage.

Private Trading

Although private trading presumably began in August, 1947, it referred to exports only as the Government itself, at that time, commenced importing and, as a result, traders were not interested in that side. That this was the case is evidenced by the latest Government figures which show that only 44 private contracts for imports were made during September/December of last year, the value of these imports

amounting to \$14,740,420. During the same period of this year the number of dealers rose to 666 while contracts amounted to \$128,660,862; thus showing a tendency for private importers to increase their business.

The purchase of cotton from America and India—the latter commencing in May only—covered the bulk of the imports, India being responsible for as much as \$10,000,000 each month. The following table shows comparative figures between private and government trading:

	Government			
	Private Import number of contracts	Import unit	Unit \$1,000	Contracts \$1,000
June	62	18,038	31	35,040
July	61	13,826	23	11,759
Aug.	95	16,265	65	101,961
Sept.	112	32,082	70	29,732

From these figures can be seen the extent to which private enterprise has improved.

As regards exports by merchants the number of contracts totalled 1,052 valued at \$7,833,000 during September to December last year. From January to September this year the number rose to 9,207 with a total value of \$151,104,000, thus showing an excess in export of \$15,536,000 but it is expected that this tendency will inevitably turn to an excess in imports, as the greater number of contracts are on a buyer and supplier basis.

The Economic Stabilization Board under the Government has drawn up an export plan for 1949 under which it is hoped that the amount of exports will be \$450 million. There is, however, a feeling of doubt as to whether this can be achieved, as the export plan of \$350 million for this year seems to have failed in so far as one can judge from the results of the first half of 1948, when the total amounted to \$77,360,000 only.

The following table gives the export plan in some detail:

Exports Plan for 1949

	In \$1,000
Cotton Textiles	173,938
Woolen Textiles	23,930
Rayon Textiles	24,570
Staple Fibre Textiles	7,690
Hemp Textiles	4,829
Woolen Yarn (80,000 Bales)	26,400
Machinery & Tools	58,840
Metal Goods	29,898
Sundries	7,400
Farm Products	2,858
Chemicals	10,939
Other Articles	88,651
Total Amount	453,543

While nearly half of the total trade has been with the United States, the recent trend is to increase trade with East Asia.

This brings us to the question of the exchange rate (referred to above), which has been the greatest obstacle to smooth trading transactions. According to the Government's Economic Stabilization Board there is a hope that a single international exchange rate for the yen will be fixed within the next three months. This is considered necessary as a step towards the implementation of the American economic programme for Japan.

Wage Stabilisation

Government officials are also at work on the wage stabilisation policy to fit in with the economic stabilisation programme. Presumably a wage ceiling will not be imposed.

Commodity Prices

Commodity prices have, during the past few months advanced about 100 to 150 times as compared with prewar levels, while, as we remarked before, there has been little perceptible change in the share price level. A staff writer of "The Mainichi" stated that "the fact that share prices have not moved in accordance with commodity prices is due to the exorbitant profits

The following table gives details of export contracts, showing the percentage of private contracts compared with the total:

	Machinery and metals		Textiles		Sundries		Farm & Marine products, chemicals		Total Amount		
	Value unit	Number of contracts	Unit	Number of contracts	Unit	Number of contracts	Unit	Number of contracts	Unit	Number of contracts	
	\$1,000		\$1,000		\$1,000		\$1,000		\$1,000		
1947 Dec.	534	26	636	64	1,050	289	936	64	3,156	443	11%
1948 Jan.	5,172	21	519	45	840	149	181	30	6,722	218	13
Feb.	770	24	2,702	58	915	253	591	54	4,978	389	31
Mar.	904	37	7,419	163	1,690	429	797	91	10,810	720	30
Apr.	1,935	39	8,776	179	1,625	400	544	91	12,380	709	29
May	665	37	15,613	248	2,473	616	872	104	19,623	1,005	48
Jun.	1,522	69	13,452	362	4,047	903	3,234	281	22,255	1,615	55
July	780	85	15,074	420	2,191	638	1,806	217	19,853	1,360	54
Aug.	2,489	136	27,857	821	2,014	656	1,369	174	33,729	1,787	—
Sept.	1,397	142	14,435	793	2,125	711	1,884	258	20,254	1,904	—

which have been made in commodities." That may be true, but people probably now realise that fewer profits are made in commodities than before. They are therefore likely to begin investing in the share market.

Japan's Trade Agreements

Trade for 1949 is promising following the conclusion of a number of trade agreements with various countries, and with the expected continuance of American support. These treaties include a financial agreement between France and French Indo-China and Japan; a \$13 million trade agreement with Egypt; a \$93 million a-year agreement between Holland, Indonesia and Japan; a proposed \$13 million a year agreement with Sweden as from November this year; and the agreement with the sterling areas of £55 million dating from July 1949 to June 1950. Over and above these a trade agreement has been concluded with Siam for \$60 million; and one with Pakistan is being contemplated. Altogether these agreements amount to around \$559 million.

To return to our trade figures. During the first half of 1948 exports amounted to \$78 million in value, as against \$84 for the same period in 1947, thus showing a decrease of \$6 million. This was due to a drop at that time in wool exports, but during the second half of the year these exports again improved, especially with the Netherlands East Indies and the sterling areas. The second half of the year, it is hoped, will therefore show an improvement over the first six months.

As stated earlier the Government's export plan for 1949 amounts to \$450 million. Great stress is laid upon textile exports which amounted to 60 per cent of the total exports in the past, but it must be noted that the heaviest imports of wool come from the U.S.A., which have to be paid for in gold dollars, while Japan's foreign textile markets are chiefly with soft currency countries. A further hindrance to Japan's textile trade is the loss of her overseas markets, which were captured by England and Italy.

SIAM'S TRADE

Sanguine hopes of a general increase in Siam's trade during the coming months is largely due to the conclusion of a trade agreement with Japan, allowing for an exchange of trade up to U.S. \$60 million. Both private and Government trading is allowed for. Japan will export to Siam railway equipment to the value of U.S. \$7 million, as well as electrical products, textiles, chemicals, paper, manufactured rubber, aluminium ware, wood products, ironware, pottery, glassware, porcelain and building materials. Exports to Japan will consist of rice, soya beans, copra, salt, tin ore, ground nuts, tapioca flour, oil bearing materials, hides and sticklac.

SUCCESSFUL EFFORTS AT RESTORATION OF LAW AND ORDER IN THE FEDERATION OF MALAYA

Firm measures are being taken by the Government of the Federation of Malaya to bring to an end as soon as possible the present state of emergency declared six months ago when Communist-led bandits—most of whom were alien-born Chinese began a campaign of murder, arson and sabotage designed to disrupt the economic life of Malaya and to establish a Communist republic. The main new measure provides for repatriation of any aliens who assist in any way the bandits most of whom are young men born in China. The first batch of young Chinese was sent back to China early in December.

One of the major obstacles facing the Authorities in Malaya is the widespread practice of paying 'protection money'.

This is particularly true of Chinese in remote areas or in places adjoining jungle country from which the bandits operate. Speaking of such persons in the Federal Legislative Council at Kuala Lumpur the High Commis-

sioner, Sir Henry Gurney, said: It is a grave mistake to suppose that the security forces can achieve quick and lasting results so long as there are a substantial number of people who are paying protection money to bandits. Such persons, he said, were breaking the law and would be regarded as such. They were the principal means of prolonging the activities of the bandits. On the following day, Sir Henry signed new emergency regulations on repatriation of aliens. These were gazetted within a week and are now in force in Malaya. Under the regulations aliens detained by the Police will be removed from Malaya and returned to their own country if they have been helping the bandits in any way, either willingly or under pressure. In an official statement, the Government said: Under present conditions no alien can expect to continue living in the Federation if he gives assistance to the Communist forces in money, food, information or in any other way. If the legal duty to

Trade will be handled on a U.S. dollar basis, with six monthly settlement of balances. Whether Siam will be able to fulfill her part of the agreement is somewhat open to doubt owing to the rejection by the International Emergency Food Council's Rice Committee in Washington of a request from SCAP that Siam should be allowed to ship 200,000 tons of glutinous and non-glutinous rice to Japan during the first six months of 1949. Siam is, however, permitted to ship 50,000 tons of non-glutinous crude rice, which has not been asked for by Japan.

INSTITUTION OF IMPORT CONTROL IN SIAM

With effect as from December 24, the Siamese Government has instituted import control with regard to non-essential commodities as listed below. Import licences are required if importers wish to bring controlled commodities into Siam. The control is exercised by the Ministry of Commerce and has been put into effect in order to conserve exchange.

Retail and dealers' prices for the import controlled goods have meanwhile advanced by 25 to 100%. The free exchange market of Bangkok is not in any way endangered by the new import regulations.

The following are the articles listed in the Royal Decree controlling imports:

1. Toilet goods and perfumery.—Toilet goods, face cream, face powder, lipstick, nail polish, rouge, eye-brow pencil, toilet soap, lotion, perfumes, essential oils, except Eau de Cologne and Lavender

2. All kinds of toys.

3. Foodstuffs:—All kinds of sugar, molasses and other sugar products, except such as used in medical treatment, fresh meat, preserved meat and canned meat, French sausage and canned sausage, canned fish, cuttle fish, sea worms, sharks' fin, and mussel, biscuit, bread, cakes, pastry, pudding, chocolate in bars or powdered, macaroni, noodles, spaghetti, other similar products, bean curd, agar and jelly, vermicelli, salt.

4. Spices and Condiments:—Mustard, seasoning powders, fish sauce, sauces, chilli sauce, including soya, misso gravies, chutneys, ketchup, and tomato juice.

5. Vegetables, fruits, and seeds used as food, whether fresh, dried, or fermented or pickled. All kinds of fruits, whether fresh, dried, pickled, or canned. Preserved vegetables, whether dried or pickled, except garlic, onions and potatoes. Mushrooms and fungi. Dried and salted cabbage. Salted olives. Melon seeds.

6. Seltzer water, sweet drinks, fruit juices, all kinds of aerated water except mineral water.

7. Passenger cars and motor cycles.

8. Oxygen.

9. Oil for mixing with paint, except linseed oil with iodine value not less than 170, and Tung oil.

The Ministry of Commerce has already set up a Board to consider the applications for the import of goods listed in the Royal Decree. Goods in transit or waiting to be shipped from abroad will receive special consideration, and arrangements will be made to permit the importation of goods ordered before the Decree was announced.

refuse such assistance was discharged by all those who now feel themselves unable to recognize it, peace in the Federation would be restored within a month'.

New Repatriation Regulations

The new repatriation rules will not apply to any Federal citizen in Malaya, to any British subject throughout Malaya or Singapore, or to any person who has not had a chance to object to his being detained by the Authorities. If any person repatriated returns to Malaya he will be liable to imprisonment for a term not exceeding three years. The Government declared officially: 'It is plainly in the interest of all communities that the dangerous and disloyal elements who have been breaking the law of this country for some time should now be removed and so precluded from doing further damage.'

The Press of Malaya welcomed the Government's firmness. One paper said 'Such action is long over-due and prompt application of the decision against persons who have shown they are unworthy of the hospitality that Malaya has granted them should serve as a further powerful deterrent measure against those who are persuaded to give aid to terrorists in any form whatsoever'.

Extortions of money

The practice of the Communists is to demand money from the owners of tin mines or rubber estates or from business men in return for freedom from attack. The more remote the mine or the smaller the village, the easier it is for bandits to make extortions under threat. There are said to be several villages where every shop pays a regular levy. Indian merchants also have had to contribute money at the point of a gun.

Such extortion by force is not new to Malaya, but it has never been practiced on such a large scale before and for political ends. Fifty years ago, Chinese in Malaya were paying 'protection money' to men of their own race, usually members of ruthless secret societies. But today, the position has changed. It is no longer a case of buying personal safety. Today anyone who pays 'protection money', willingly or unwillingly, is endangering the lives of other Malayans because he is supporting an organised campaign of terror and is helping the bandits responsible for the terror to last out longer.

During the past six months 410 civilians or members of the Police or the forces have been killed by bandits. Another 319 were wounded. Most of the civilians killed were Chinese, and many of them anti-Communist supporters and members of the Kuomintang. The total number of bandits killed in the same period was 324. Fifty two were wounded and another 235 captured.

The Squatter Problem

The new regulations affect any person who pays 'protection money', but they also closely concern the squatter population. The bandits number about 5,000. They bathe like leeches on the squatters, of whom there are about half a million in Malaya. These squatters most of whom have immigrated from China, are small farmers growing market produce and rice. They settle on unoccupied land, mainly along the railways and the rivers. Because the land is unoccupied, the jungle is never very far away from the squatter area. The average squatter, who wants nothing more than to be left alone to live and work in his own way, is completely at the mercy of the bandits, many of whom have relatives amongst the squatters. If they ask for rice or money or shelter, the squatter gives them, rather than cause any trouble. He knows, too, that many bandits are squatters like himself, tilling their fields by day and marauding by night.

Because the squatter areas are near the jungle where the bandits build the camps from which they operate, the support of the squatters, whether given freely or by force keeps the bandits going. This aspect of the squatter problem has drawn the particular attention of the military and the Police, whose main object is to prevent the bandits from concentrating in force and whose aim is to disperse them into small groups, denying them food and shelter, before they are killed or captured.

A typical squatter area is Sungai Siput in the centre of the rich mining districts of the State of Perak. This area is a maze of tracks in the jungle bordering on many tin mines, the railway line and the main trunk road. During the Japanese occupation, Sungai Siput was the principal stronghold of guerrilla resistance in Malaya. The Japanese never managed to clean it up.

British and Gurkha troops have now swept Sungai Siput area, harassing the bandits in a three-week operation and removing most of the squatters to new settlements about fifty miles away on the coast. Without the help of the squatters from Sungai Siput, the military have made the district quiet.

About 70 squatters from Sungai Siput, dissatisfied with being harassed by both the Communists and the Army, declined to be resettled in Malaya and asked to be sent back to China. These voluntary repatriates sailed from Penang a week later.

Banishment and Detentions

The new regulations to repatriate any person assisting the Communists in any way are additional to the existing laws of banishment. In normal times, banishment from Malaya is given only to convicted alien criminals at the end of their prison terms. Last year 550 persons were banished. Of these 410 were aliens and 14 were British

ECONOMIC REPORTS FROM INDONESIA

According to interim figures at Batavia exports from Indonesia during September were, in thousands of guilders: rubber 39,915, including native rubber 21,549, copra 20,509, palm-oil 3,016 and tin-ore 10,320. For comparison the following export figures are given (in million guilders):

	1st half of 1948	July	August	September
Rubber	17.1	26	22.2	39.9
Copra	10.9	19	15.9	20.5
Tin-ore	12.9	12	24.7	10.3

Passenger Service Indonesia-Australia

The steamer New Holland of the Royal Intercean Line having a gross tonnage of 11,069, left Batavia for Australia. With this first post-war departure the scheduled passenger service between Indonesia and Australia has been re-established.

subjects convicted in court. Of the others 125 were aliens and one a British subject the banishment of whom, it was considered, would be conducive to the good of Malaya. At present there are 4,579 persons detained by the Police in Malaya for some infringement of the emergency regulations which were made to combat the activities of the bandits. Many of these are members of the Malayan Communist Party or other organisations dominated by the Communists. All these parties were banned in Malaya last July.

All persons detained have the right to appeal against their detention. If an Advisory Board decided that they are detained correctly, and if the detainee is an alien, he will be repatriated. Arrangements are also being made to repatriate dependants. If a detainee does not wish to wait until his turn comes for hearing by the Advisory Board, he may ask for voluntary repatriation.

The Federal Secretariat is already arranging to repatriate many detainees. The first group, young unmarried men in their twenties, all born in China, returned to their homeland last month. Later, married men and dependants will go.

Influential Chinese support strong measures in the emergency, because they know that only firm action will end the gangsterism. They are ready to support even the repatriation of squatters, if that is the only way to free the squatters from the smothering embrace of the bandits. The vast majority of the Chinese population in Malaya wants only good Government, the right to establish an efficient and fair business under stable conditions.

THE COMING IMPORT CONTROL IN THE PHILIPPINES

By N. MOST

(General Manager, Getz Bros. & Co.)

As this is written, the President has not yet issued an executive order putting the Import Control Act into effect. Accordingly, any statements made relative to the operation of the Import Control Board and its effect on trade can only be regarded as surmise. However, a study of the proceedings of the various panel discussions as well as of the information which Secretary of Commerce Balmaceda has made public is sufficient to give us a fairly good idea of the probable workings of the Act and its probable effects on business.

The Department of Commerce recently concluded a series of hearings at which importers were invited to state their views. These meetings as well as statements made by Secretary Balmaceda and Executive Officer Ledesma have been impressive in that they demonstrate an obvious desire on the part of the Department of Commerce to cause as little disruption to business as possible, and to apply the import control measures as fairly as possible with such a difficult piece of legislation. As all governments which have attempted it have discovered, import control is one of the most difficult measures to implement which a government can possibly attempt. The number of importers and the variety of goods they handle is so extensive that the Department of Commerce will, of necessity, be required to process a huge amount of paper. All indications lead us to believe that the Department of Commerce has fully anticipated most of the problems which will confront it, and has taken all steps within its power to prepare for the coming activity.

While the administrating of the import control is undoubtedly in the best possible hands and we may anticipate that it will be administered in a manner which will bring credit to the Department of Commerce, nevertheless, we cannot overlook the fact that import control once effected, even though mild in the beginning, is more likely to increase in scope and in number of items controlled as time goes on, than to decrease. This has been the history of import control in almost every country which has imposed it and it is logical to presume that the course will be the same in the Philippines. Statements continue to appear in the newspaper issued by officials in Philippine business and some departments of the Government, expressing the viewpoint that the Philippines should have import control because almost every other country in the world has it. Such a viewpoint can only be the result of lack of knowledge as to why import controls are imposed, and can only come from

people not conversant with the fact that import control is a strong medicine and one only taken by a sick country. The disease consists of a shortage of U.S. dollars. And while the medicine, if taken in doses commensurate with the extent of the disease, may be regarded as helpful, it has been the experience in many countries that the medicine often becomes worse in its effects than the original disease. In most cases, a far better course lies in increasing exports. It is interesting to note in that regard, that the Philippines is still shipping only token quantities of quota items to the United States. As an example, whereas the quota allowed for cigars is 200,000,000 a year, the shipments for 1948 up to October 2, 1948, were 839,222. Likewise in coconut oil, whereas the quota is 448,000,000 pounds, shipments to October 2, 1948 were only slightly in excess of 60,000,000. The unbalance of trade for the first 6 months of 1948 was approximately P250,000,000. This disregards the invisible exports which actually give the Philippines a favourable remittance balance. It would appear that a concentrated effort to increase exports would result in enabling the Philippines to avoid import control and thus avoid the reduction in the standard of living which control brings.

However, regardless of whether or not the control of imports is really necessary in the Philippines, it appears that it will be with us and that we had best consider its probable course and effects.

There are a number of loose ends relative to import control on which the Government's decisions, if they have been made, have not yet been announced. First there is the question of the effective date of the control. Secretary of Justice Sabino Padilla has given the opinion that the Import Control Law will not become effective until the President issues an executive order setting forth the list of non-essential and luxury articles to be controlled as well as the rules and regulations for carrying out that control.

Another point which needs clarification is the establishment of definitions of non-essentials and luxuries on which the operation of the law will be based. No such definitions are included in the law. It is true that these terms are very difficult to define, since they depend in a large measure on the standard of living of the group concerned. As an example, refrigerators, which will undoubtedly be controlled under the Import Law, are regarded as absolute necessities by Americans living in the Philippines; however, to Filipino families in the barrios, where no elec-

tric power is available, a refrigerator is of no use whatsoever.

The Import Control Board from its statements thus far seems to be taking the view that the term *non-essential* can be used both in the sense of unnecessary for livelihood or manufacturing purposes, as well as unnecessary because a substitute is available in the Philippines. However, adoption of the latter definition results in actuality in a general import control rather than a restricted control. As an example, it is very probable that the Import Control Board will prohibit the importation of soap on the basis that since it can be manufactured in the Philippines, it is unessential. However, soap can certainly not be considered unessential in so far as its necessity for livelihood is concerned. It would seem logical to presume that if the Philippine Congress in passing the import control measure truly wanted to give the President power to control all import, it would have so stated in the law. Accordingly, it appears necessary that some limitation on the interpretation of the words *luxury* and *non-essential* be included in the law in order to limit its administration.

Another matter which has not yet been clarified, is the question of who will receive the import quotas. There are two groups of contenders for this distinction, one, the importers, and the other the indent houses. The importers in the main are made up of the Chinese dealers, although there are a number of Filipino, American, and European firms which import as well. The indentors are largely American or European firms holding the exclusive representation of foreign manufacturing firms. Of course, there are firms of all nationalities doing both import and indent business. In the early consideration of this matter, it appeared that the Import Control Board favoured giving import quotas to the indentors or exclusive representatives, since there are fewer of them to deal with. However, it appears that the quotas will be given to the importers, on the theory that the quotas will be widely spread and control of the market in a particular commodity should not be held in a few hands. This may make things difficult for certain indent houses which have in the past been selling some of their products exclusively to a closed ring of importers. They will now find themselves in the hands of the ring which will be able to more or less dictate terms.

In spite of the foregoing uncertainties, enough has been revealed about future import control operation to give us a fair idea of coming events. It can, of course, be anticipated that the President's order implementing the Import Control Law will set forth a list of classes of commodities which will thenceforth require import licenses for importation into the Philippines.

These items will probably be divided into three classes, those which are

considered luxuries, those which are considered non-essential and which could be replaced by items manufactureable in the Philippines, and those items considered non-essential not manufactured or manufactureable in the Philippines. These classes will probably be divided into sub-groups and importers will apply for separate licenses in each sub-group. It is anticipated that the importer will be free to import individual items within a sub-group to suit his requirements. As an example, importers of cosmetics will probably be given a dollar quota under which they can import face-powder or hair-oil or any other cosmetic in any proportion which suits them.

In order to qualify for an import license, it has been indicated that an importer will have to be registered with the Securities and Exchange Commission or with the Bureau of Commerce, licensed to do business in the Philippines, and also registered with the Import Control Board.

After registration, he may apply for quotas in the various sub-classes in which he is interested. The importer will be required to pay P2 as a filing fee with each application, and upon the granting of a license, he will be required to pay a fee of P1 per P1,000 of the c.i.f. value of the license granted. Funds derived from this source will be used in operating the Import Control Office.

Import licenses issued will probably be valid for 6 months and will have a provision for deducting individual shipments from the total amount licensed. The importer will have to submit his import license to the Customs at the time of arrival of the merchandise, and will also have to furnish a copy of his import license to the Philippine Consulate in the country of the origin of the merchandise at the time the consular invoice is secured. This latter detail will probably require some reconsideration, since, otherwise, a great number of copies of the license will be required. It would appear sufficient to furnish the Philippine Consul only the import license number without the necessity of submitting a copy, since the Consul would, in any case, have no way of determining the unused balance of the license. Importers who receive licenses, but do not import the full amount of the license within its validity period, will be required to show cause why he should not lose his quota for the succeeding periods.

In applying for an import license, importers will probably be required to state the amount of the commodity they imported during a base period to be set by the Import Control Board. This period will probably be the years 1947 and 1948, or some part thereof. If the importer's application is proved, he will, in all likelihood be given an import license for a percentage of the amount he imported during the base period. If, as an example, he imported

INSTITUTION OF IMPORT CONTROL IN THE PHILIPPINES

The President of the Philippine Republic has signed on December 28, 1948, the Import Control Executive Order which will go into effect as from January 1, 1949. The Import Control Order is a very controversial measure and bound to affect the foreign trade of the country to a great extent. The majority of controlled import commodities will be curtailed by 40 to 80% (base period July 1, 1947 to June 30, 1948).

The Philippine President's "Executive Order on Import Control" will be published in our next issue (January 12th).

The order, designed to conserve the Islands' dollar reserves, is expected to affect every inhabitant of the Philippines as the list of articles subject to control ranges from matches, importation of which will be cut 60 per cent, and other articles like cloth and soap which may be considered as necessities in everyday existence, to real luxuries,

P100,000 worth of a particular item during 1947-48, and the period of the quota is 6 months and a 40% cut is to be made, he will be given a license for P15,000 for the 6 months' period. It can thus be seen that under this system, if adopted, no definite quota will be set, since the amount to be licensed will depend on the amount applied for. Although this method presents problems, it is much to be preferred to the alternative method which would require the Import Control Board to wait until substantiated reports of all applicants' imports during the base period were received, and then make a division of a fixed quota among these applicants in proportion. The problems presented by this latter method are obvious. It is probable that the President's order will limit new importers to 20% of the allocation to old importers. This would require under the first system indicated, that the Control Board wait until it has determined the total of old importers' quotas to be issued before licensing new importers.

Of vital interest to importers is the list of items to be controlled and the extent of limitation. No official information on this subject has yet been released. However, a consideration of the items discussed at the various panel meetings held by the Import Control Board at which importers were invited to state their views, gives us a basis for reasonable surmise.

It appears that the Import Control Board would like to cut the importation of items to be controlled by about 40%, on the average, of the importations during 1947-48. However, the amount of cut will probably vary widely on different classes of goods.

Of the various items discussed in the panel meetings, it would appear that the following groups of items are due

like cosmetics and beauty preparations (lipsticks, rouge, etc.) and jewelry.

A majority of the cuts, however, will be from 40 to 80 per cent. Affected by the control order are 127 items in 26 categories from automobiles to alcoholic beverages, jewelry, perfumes, textiles, tobacco, butter and fountain pens.

In business circles, American importers are the ones principally affected by the order which implements an act passed in the last session of Philippine congress.

The control order is accompanied by a licensing system which will be administered by an import control board.

Twenty per cent of each established and licensed importer's quota is set aside for participation by new importers in compliance with a strong public demand for Filipinos to share more equitably in established business.

The control board will fix quarterly quotas, and may add to the list of restricted items or increase or decrease

for control: beverages, wines and liquors; cosmetics; watches and clocks; beauty-parlor equipment; textiles, in the high priced cotton and rayon classifications; ready-made clothing; firearms; fireworks; and ammunitions; soaps; toys and novelties; photographic equipment (non-professional) and supplies; radios and moving-picture films; cigarettes; home-type cooling apparatus and electrical appliances; articles manufactured of leather, such as shoes, etc., as well as rubber shoes and components thereof; fresh and dried fruits (including oranges), candy, sugar, molasses, etc.; automobiles; glass and glassware, clay porcelain and china, sundries, chewing-gum, matches, candles, steel office furniture (except filing cabinets), etc.

Of the items originally considered for control, but which will probably be excluded are explosives, tobacco, leather skins, bulk candy-making materials such as glucose, and construction materials. Naturally, both of the foregoing lists are only surmise, and official information will not be available until the President's order is issued.

In general, it can be considered that the aims of the government in imposing import control are to conserve dollar-exchange, to promote the domestic manufacture of articles previously imported, and to assist the Filipino businessman in establishing himself in Philippine trade. It can be anticipated, too, that the Government will seek to avoid causing shortages or increases in prices of items which are in everyday use by Filipinos. With the foregoing aims in mind, businessmen in the Philippines and those interested in Philippine trade should be able to make a fairly accurate guess as to the effect of import control on their own particular business.

restrictions at any time it sees fit, with presidential approval.

It was originally planned to impose a complete ban on importation of several goods but it was finally decided that such an action might have a detrimental psychological effect abroad as well as locally and may prove too much of a shock to business. The percentage cuts imposed range from 20 to 90 per cent of the volume of imports for each class of item for the base year July 1, 1947 to last June 30.

Among the goods heaviest hit by the new import control order are shoe uppers and rubber soles for rubber shoes whose importation volume will be slashed by 95 per cent and denatured alcohol, shells and manufactures, and manufactured products from wood, bamboo, rattan and reed which will be reduced by 90 per cent of the current importation.

Cigars and laundry soap, which were among the items at first proposed for total exclusion, will be reduced by 80 per cent in their importation volume.

The volume of importation of some items is to be reduced in accordance with their selling price but most goods will be limited irrespective of prices.

Least affected by the order will be nuts and fresh fruits (20 per cent cut), appliances (25 per cent cut), leather, skins and imitations (25 per cent cut), cigarettes (30 per cent cut), and underwear (30 per cent cut).

One of the objectives of the import control order is to conserve the dollar currency and reserves of the country. It is also intended to aid local industry by limiting the importation of those goods which can be produced or which can be substituted here. Another objective of the control is to channel expenditures at present being made on luxury and non-essential goods to capital commodities which may materially aid in the reconstruction and rehabilitation of the country.

It is estimated that the value of imports of luxury and non-essential goods during the one-year effectiveness of the control order will be reduced by from \$4,000,000 to \$5,000,000 pesos.

The executive order will not be applicable to commodities which leave ports of embarkation before Jan. 1, or which are in transit on that date.

The President's executive order provides that effective Jan. 1, no non-essential or luxury article specifically mentioned in the list attached to the order may be imported into the Philippines without an import licence issued by the import control board by authority of the President.

It is specifically provided that the President, by authority of law, and upon certification of the chairman of the import control board, may add or delete items from the list.

The quantity or value of each luxury or non-essential article that may be imported within the year 1949, the executive order provides, will be fixed by the import control board, by authority of the President, quarterly, semi-annually, or annually at the dis-

Railroads in Korea are predominantly north-south, running the length of the peninsula. A main trunk line, almost completely double-tracked, forms an artery from Manchuria to Pusan. By means of this line it is possible for a person to travel from Tokyo, Japan, by train, to Kyushu, ferry to Pusan, travel by railroad to Sinuiju, on the Manchurian border, continue on a Manchurian railroad to Russia, and by rail to Moscow and western Europe. An alternative section to the main line between Seoul and Pusan runs through the mountain range east of the main line. Branching to the east at Seoul, another main line crosses the peninsula to Wonsan, an important port on the Japanese Sea, and continues along the eastern coast to Hunyung on the northern border of Korea where it connects with a Russian

creation of the board in accordance with the schedule of percentage of reductions prescribed in the order.

The import control board is to fix the quota for each article in terms of quantities of total money values and will allocate such quota to the importers duly registered for such article on the basis of their respective quantities or values of imports during the base period, reduced in accordance with the percentages prescribed in the order.

The executive order also provides that not more than 20 per cent of the quota fixed for each article will be set aside, to be allocated to importers who had no importation during the base period from July 1, 1947, to last June 30, but who have registered subsequently as importers of such articles.

No new importer will be given a percentage allocation bigger than one-fifth of the percentage allocated as quotas to the old importers. Applications for licenses to import any portion of the 20 per cent reserved quota must be filed within one month from the date the quota is announced, according to the order.

The import control board is empowered to cancel the license of any importer who has failed or has not taken proper steps to import the article covered by his license.

The executive order also specifies persons and entities or establishments who may not be granted import license and the requirements prerequisite for the issuance of such licenses. Those who may not be granted import license include: importers not duly registered as importers in the securities and exchange commission or in the bureau of commerce; those not duly licensed to do business in the Philippines and have not paid all lawful taxes and fees due; and those not registered with the import control board for purposes of the import control law.

The executive order also provides penalties for violation of the import control rules and regulations, including the forfeiture of the goods and the penalties prescribed by the import control law itself.

KOREA'S RAILWAYS

line to Vladivostok. Besides these main lines, there are numerous shorter branch lines connecting the richer agricultural and commercial regions of Korea.

The first railroad in Korea was a private line, built by American engineers with American money, running between Seoul and Inchon, opened in 1895. In 1908, another privately operated line, financed and engineered by Japanese interests, was opened between Seoul and Pusan. During the Russo-Japanese War in 1906 the Japanese added another section from Sinuiju, on the Manchurian border, to Seoul, completing the artery to Manchuria, and laid a branch railway from Pusan to Masan on the southern coast.

A line branching from the Seoul-Pusan system at Taejon and running to Mokpo on the southwestern tip of the peninsula was completed by the Japanese in 1914. That same year, the important line crossing from Seoul to Wonsan was completed and its extension to the Manchurian border begun. This extension, which measures 383 miles in length, was completed in 1928.

All Korean railways which had been built by the Japanese Government were put under control of the South Manchurian Railway Company in 1917 to consolidate operation of Manchurian and Korean railways, both countries being occupied by the Japanese after the end of the Russo-Japanese War. In 1924, the Government-General of Korea again took control of Korean railways.

Plans were formulated and construction started on a route to link Wonsan and Pusan by following the eastern shore line, but operations ceased when Japan entered World War II.

When the American forces arrived in southern Korea, they discovered that ten out of eleven locomotive engineers and holders of other responsible jobs were Japanese. All higher officials were Japanese. Of the 17,500 Japanese then employed by the railroads south of the 38th parallel, not one remains today; Koreans have taken over their duties and have shown ability and loyalty to the railroad.

A school for railroad employees, located at Yongsan, a southern suburb of Seoul, trains young Koreans to become civil, locomotive, and mechanical engineers, station masters, business administrators, traffic agents, and in the hundreds of other technical and skilled occupations of railroading. The majority of students entering this school are fifteen years old, but a few older men, who have shown ability in railroad work, are also admitted. At first, these schools gave special six-month intensive training courses, but regular four year curriculums were begun later.

Railway Development under the Japanese

Under the Japanese administration of Korea there were four corporation-owned railroad south of the 38th paral-

lel, the controlling stocks held by Japanese businessmen. Three standard gauge lines connected Seoul and Chun-chon, Ansong and Kunsan, and Chochiwon and Chungju. A narrow gauge line ran from Inchon to Yoju. These privately operated lines were common carriers of local passengers and freight. The Seoul-Chun-chon line ran through some rich forest regions; and the Ansong-Kunsan and Inchon-Yoju lines, through productive rice areas. The Japanese economy of the last four years held no room for these private railroads and they were not maintained satisfactorily. Train operation was inefficient and not dependable; engines and rolling stock were in poor condition. To keep these lines in operation, the Department of Transportation of American Military Government absorbed them into the national railroad system on May 1, 1946. The Department is also planning to convert the Inchon-Yoju line to standard gauge when equipment becomes available.

Rolling Stock and postwar conditions

The standard gauge (4' 8½"), used in Korea and throughout the world, was developed by engineers from the ancient Roman chariot. When railroads were first laid, experiments were made to find the best gauge, one that would stand heavy strains, and the gauge of Roman chariots, tested by years of endurance in wars and chariot races, was proven the most nearly perfect.

No new lines are being constructed; Military Government has been applying all equipment and materials in maintaining the existing roads which became badly rundown during the course of the war. Korea has some good locomotives, but most of the heavier engines were caught above the 38th parallel at the end of the war. In southern Korea there are twenty Mikado and mountain type freight engines and Pacific type passenger locomotives, while in the Russian occupied territory there are 137 of these medium weight engines. There are no heavy locomotives, by American standards, but the above, all of Japanese manufacture, are some of the best locomotive types produced.

The Pacific type is a copy of the American type engine originally used by Missouri & Pacific Railroad, and the Mikado is a medium weight locomotive designed for the Japanese by American engineers. These first class engines have been run for five years without general overhauling and are now in poor shape, requiring complete boiler overhauling and general repairs. All of Korea's smaller locomotives are in an equally rundown condition, presenting a tremendous task for Korea railways to get this equipment back into dependable working operation. Freight cars are usually 33-ton capacity with four-wheel bogie trucks.

There are an equal number of box and open type cars with some special

types such as refrigerator and cattle cars. The majority of passenger cars are third class having straight-backed chairs. There are a few second-class, or sleeper cars, baggage and mail cars operating. All passenger and freight equipment is in rundown condition and is being repaired by Korea shops. At present there are five hundred passenger coaches on the railways.

Two big railroad shops are located in southern Korea, one at Pusan and the other at Yongsan. These repair yards compare well with American shops and are equipped to handle any sort of railroad work. Complete locomotive overhauls, locomotive assemblies and machining of engine and car parts may be handled by these excellently equipped shops, complete with turntables, overhead cranes, and power-driven machinery. Both shops are managed by Koreans under control in the hands of the Superintendent of Motive Power and Equipment. There are some very good Korean mechanics, machinists, boiler makers, and technicians in these shops, but most of the Korean skilled workers are new to the job, such positions having previously been held by Japanese. Two thousand skilled men are needed and technicians are being trained as rapidly as possible in the railroad schools to fill these positions. The Yongsan shop is equipped to employ 5,000 Koreans and the Pusan shop, 3,000, but due to lack of experienced men, many fewer Koreans are now employed.

Excellent work done by the Japanese

Roadbeds, cuts, sidewalls, and retaining walls are in excellent condition. Well laid, fine spiral curves and with a maximum 1½ percent grades on the main trunk lines, the tracks are examples of fine engineering, despite problems encountered in crossing the sharp, mountainous backbone of Korea. Between Seoul and Taejon (120 miles) all signals, switches, and other operational equipment are fully automatic. Outside this section, all such equipment is semi-automatic and manually operated, not such a liability in Korea where manpower is easily available.

The Department of Transportation is electrifying a twenty-five mile section between Chechon and Tanyang on the alternate route to Pusan. Many tunnels and steep grades are located in this stretch. Electric engines serve to eliminate the smoke and gas hazards in the long tunnels. These engines are also capable of faster hauls across steep grades. Other areas along this line eventually will be electrified as equipment and materials become available.

Passengers & Freight

Korean passenger trains are badly overloaded despite efforts to limit pas-

sengers. Set quotas of tickets are sold for each train, but people hop onto the trains, with or without tickets. With so universal a desire for free rides, it becomes impossible to prevent these kibitzers from boarding most trains. Unlike America, where 75% of the traffic is freight, Korea's railroads handle 80% passenger traffic. With a large population and little road transportation, Korea depends on her railroads for transportation. When occupation forces landed on the peninsula there was practically no freight traffic because industry was at a complete standstill. Since the liberation of Korea freight has risen tremendously with the rival of Korean industry.

Safety precautions are being taken. The Japanese had not thought headlights necessary on locomotives and did not install them. Headlights are now placed and more will be placed on sixty locomotives and the other engines as fast as materials and equipment permit. Koreans have the dangerous habit of trespassing on the railroad tracks, walking over trestles, and shortcircuiting mountains by going through tunnels. Many people have been killed by such trespassing. Signs warning trespassers away have been posted liberally along the tracks and efforts are being made to keep people from walking the tracks.

There are 1700 miles of track in southern Korea. With the Spring floods, over 300 washouts occurred in this amount of trackage. Included in the damage were five bridges, major jobs to rebuild. Korean engineers, construction and track crews worked steadily for the first 72 hours of the flood without breaks or shift changes in their efforts to save the tracks. After that, two crews worked 24 hours a day to rebuild the main sections. Army engineers rebuilt two bridges near Pyongtaek on the main artery from Seoul to Pusan. At the end of the first week traffic was restored on the line except for the two bridges near Pyongtaek and in another week the complete line from Seoul to Pusan was in operation again. Repairs to other less important lines continued and, after thirty days from the beginning of the flood, normal train service was restored throughout Korea.

The first-class Korean Liberator passenger train began service on May 20, 1946. This train will establish a standard of operating efficiency which will act as a goal for all Korean train operations. Originally consisting of only one train, a second section has been constructed to make possible a two-way daily run between Seoul and Pusan. On August 15, a schedule was initiated in which one Korean Liberator leaves the Seoul and Pusan terminals every morning and arrives at the other depot at the evening of the same day.

KOREA'S SILK INDUSTRY

The history of the Korean sericulture (silk) industry, and the domestication of the silkworm dates to a period far earlier than civilization in European countries.

The first mention of silk is made in connection with the Chinese Emperor W' Heng, who reigned in 2500 B.C. He was a great patron of agriculture and was the first to cultivate the silkworm. To him is also attributed the invention of the loom for weaving silk into the patterned cloths. These were not only prized in China, but were exchanged for more than their weight in gold in India, Persia, Greece and Rome.

The Chinese, always a wily people, in order to keep the secret of sericulture to themselves, told foreigners that silk was obtained from the fleece of sheep, or weaved from herbs exclusively cultivated in China. Thus, the secret of sericulture was carefully guarded by the Chinese and successfully kept until about 300 A.D.

Very little silk was used for weaving outside of China in ancient times, but Chinese silks and embroideries were exported and highly prized.

During the 17th and 18th centuries the silkworm was an object of much interest and speculation in Europe and many books and pamphlets concerning its origin, habits and history were written. Little did European authors realize that sericulture was prominent in China as early as 3000 B.C. Even the name is derived from the Chinese "SSU," the word for silk. All the names by which ancient China was known to the world were also derived from that precious fibre—names such as "T'sin," "Sinem" and "Sereca." China has an uninterrupted written history which goes back to between 2000 B.C. and 3000 B.C. and in it there are many references to the silkworm, sericulture, silkweaving, and silk embroidery.

Introduction of Silk in Korea

As with medicine, the secrets of the sericulture industry were introduced through the International Market, established in North East China about 200 B.C., after much bribing and exchanging of goods. Tradesmen, however, because of the exorbitant prices they had originally paid for the process of sericulture, sold goods only to those who would pay dearly. Thus, only wealthy Korean families dealt in any extensive measure with the silk industry and usually carried it on as a side-line to other regular occupations. Because of the labour involved in rearing silkworms, the cultivation of mulberry trees, and the intricate processes used in weaving, many wealthy Korean families regarded the industry as superfluous due to their inherent laziness. This factor caused a decided decrease in the Korean silk industry.

The Korean climate and soil were highly favourable for the raising of silkworms and mulberry trees, but initially little progress was made as the species reared by the Koreans were inferior, and their methods were primitive. The most important factor in the silk industry, the cultivation of mulberry

trees, on the leaves of which the silkworm feeds, received little or no attention.

Japanese Development

Upon their annexation of Korea, the Japanese realized the profits that could be obtained from the sericulture industry and made every effort to improve it.

After 1910 the Japanese Government employed every means to improve both the quality and quantity of Korean cocoons. Regulations were issued in 1919 to provide for the examination of eggs and the prevention of mulberry tree diseases. Institutions for the teaching of this profitable business were established in the provinces, but, as was the case throughout the Japanese occupation, only privileged Koreans were allowed to attend. Seventy-five percent of the students were Japanese. The results of all these efforts was evidenced in the reports of 1920. The number of families engaged in sericulture in that year increased by 45% while the volume of cocoons gathered was calculated at 681,800 pounds of which 408,000 were exported to foreign countries. Many Americans who prided themselves on having garments of "Japanese" silk probably never realized that 30% of their clothing was made in Korea.

Before Japanese occupation, the reeling of silk was done at home by means of simple implements such as the old home-made silk winder. The finished products were invariably for home consumption. The Japanese introduced the use of modern machines and reeling mills which in 1913 numbered seventy. Their aggregate output of raw silk was valued at Y13,920,000—all intended for export. Although hand-reeling was still commonly used in the country, the silk industry, set by the Japanese, outstripped the former means of production.

Except for the actual rearing of cocoons by the farmers, the industry was almost exclusively in the hands of the Japanese who controlled egg production and distribution, the price paid for cocoons and mulberry seedlings, and monopolies in the form of associations and factories.

Reports show that in 1944, there were approximately 921,997 families engaged in sericulture, or nearly one-third of the agricultural family population. Of these it was estimated that 681,447 families lived south of the 38th parallel. In the same period (1944) approximately 132,844 acres in South Korea were devoted to growing mulberry trees. The most important silk-producing provinces are Kyongsang Pukto, Cholla Namdo, and Kangwon Do, which account for 50% of the cocoon production.

Organisation of Industry

During the period from 1934 to 1940, sericulture reached its highest peak of production with an estimated 50,000,000 pounds of cocoons in 1936. Since 1940, because all available Japanese-controlled factories, including those of the sericulture industry, were turned to the war effort in the manufacturing of

clothing for the Japanese Armed Forces, the production of silk dropped to less than 25,000,000 pounds of cocoons—50% of its production peak in 1936.

Under the Japanese various associations, controls, and societies were operating with the Japanese to milk the sericulture industry to the maximum.

Sericulture was highly organized on all levels even down through the "gun" (county level) where cocoon production was the heaviest. The chief sericulture technician on each level was invariably a Japanese, who was ordered to cooperate with various other societies also controlled by the Japanese—The Korean Sericulture Society, the Silk Controlling Company, the Korean Filature Society, and the Korean Joint Floss-Silk Manufacturing Society.

The Korean Sericulture Society was organized with other associations in each province—the Japanese, including Government employees, holding all the lucrative positions. It was a common occurrence for one man to have a Government position and at the same time be an official in all six of the above associations, companies, and societies.

Thus, under the Japanese occupation, the Korean silk industry, instead of taking place entirely in the homes of wealthy Korean families, was expanded to one of the largest textile industries of the Far East.

Post-war Situation

When American occupation forces arrived in Korea, the sericulture industry was in very poor condition. Filature (reeling silk from the cocoon) had been allowed to run down; spare looms were greatly in demand. To overcome these conditions the Department of Agriculture adopted a five-year plan which has five functional categories.

Dealing mainly with the seedling of the Chinese White Mulberry tree, the most popular in Korea, the first and second phases relate to the growth and grafting of the seedling to existent mulberry trees. After completing considerable research on the growing of these trees it was found that three types of grafting could be used most effectively: (1) grafting to the lower limb, (2) grafting to the centre portion, and (3) grafting to the upper part of the mulberry tree.

After grafting the mulberry sprig is allowed to grow for three years, after which the leaves obtained from the sprig are finally ready for consumption by silkworms.

The third phase of the program is concerned with the production of silkworms. In each of the eight provinces there are eight original silkworm egg producing stations, which function under the local government of those provinces. The National Experiment Station at Suwon first obtains the silkworm eggs from the Chinese and Japanese Government (the latter now under the control of Military Government). After considerable research, the best breeds are sent to the original silkworm egg producing stations for further tests and crossbreeding. The silkworm eggs are then given to the Silkworm Egg Producing Commercial Stations of which there are seventy in the eight provinces. After

approximately two years of further crossbreeding and multiplying, the eggs are sold to the 910,000 cocoon growers in the Southern Korean provinces. In each province, close to the egg producing stations, are official inspection stations staffed by capable Koreans. These stations supervise and inspect all egg producing stations as to silkworm and mulberry trees diseases.

In the fourth phase of the plan, the Department of Agriculture concerns itself with the operation and production in the forty-seven filature (spinning mills) in Korea. Authorization for construction of five additional plants has been granted.

The fineness in texture of raw silk depends upon the condition of the machinery, quality of cocoons, and the proficiency of the operators. Consequently, because of the poor condition of these filature plants, the Americans saw a great task ahead of them. Not only were huge quantities of new machinery needed to replace machinery the Japanese had either destroyed or burned—but buildings, as well as Koreans to act as technicians, were greatly in demand. At present there are only two filatures in operation, one located in Kyonggi-do province, the other in Chungchong Puk-to province, that produce raw silk suitable for export. When the cocoons reach maturity they are purchased and allocated to the forty-seven filatures.

Phase number five encompasses the silk-weaving process. These mills vary in size from five looms (hand-operated machines) to modern factories (with several hundred power-operated machines). There are approximately one hundred and thirty silk weaving factories in Korea.

The textile-weaving mills, the same as the filatures, were in such a run-down condition that many looms, formerly employed in weaving cotton, hemp or flax, were converted to the weaving of silk. These looms had been idle, due to a shortage of raw materials. The consumption of the finished product, not yet fit for export, goes to the people in Korea—people who are greatly in need of clothing.

Waste Silk

There is a great amount of waste silk which is accumulated through the various processes of finishing. In South Korea there are not enough waste-silk mills to take care of the large accumulation of waste cocoons, pierced cocoons, filature wastes, etc. Consequently, several million pounds are now being held in filature industries and silk mills. Previous to occupation by American forces, the majority of waste-silk was exported to Japan where the Japanese had seven waste-silk factories. In Korea the Japanese had only one factory doing the work—the greater share of its produce going to the Japanese living in Korea, very little going to the Koreans. It had been proposed that, since Japanese productive capacity has been reduced to 25% of the pre-war level, one of the factories be sold to the Koreans. With the use of this plant waste-silk could be made into batting and wadding for clothing and blankets.

BRITISH INDUSTRIES ADVANCE IN RESEARCH AND PRODUCTION

NEW MOTOR CAR MODELS

Britain's new cars, displayed at the recent big motor show at Earls Court, London, are quite different from their pre-war predecessors, although progress has been evolutionary rather than revolutionary. The new models owe much to the experience gained in war-time production of both vehicles and aircraft. The main characteristics are: more roominess and comfort, lighter weight, smart trimming, economical use of petrol, snappier performance and a handsome facia board.

The chassis construction has undergone considerable change. The body and frame of the smaller cars are frequently built as one unit, which is one of the reasons why they are lighter than the pre-war models. Another reason for the reduction in weight is the use of new alloys making possible greater strength with less weight. This accounts for the considerable improvement in the

One of the greatest difficulties is the training of technicians and the procurement of machinery for filatures.

Current Problems

Reports have come in that some Korean farmers were cutting down mulberry trees, believing that sericulture would not be revised in Korea. Orders have been sent to the various Provincial Governors to discontinue this practice. Sericulture experts have now been sent to each of the provinces with additional instructions.

To combat the Japanese monopolies, all may be liquidated except for the Korean Sericulture Society. Further steps are being taken to rid these organizations of grasping Korean officials. This will maintain a strict control and prevent farmers from being further exploited by Korean politicians who have stepped into the shoes of the Japanese.

The five-year plan further embraces the establishment of a Sericulture College for the training of Korean personnel, a mulberry seed collective farm, a wild silkworm experiment station, and many other necessary enterprises.

Progress has been made in reviving the sericulture industry in Korea. An adequate supply of silkworm eggs are now stored in the commercial egg producing stations for autumn delivery. The fifty-seven commercial and thirteen official silkworm egg-producers will produce enough eggs for summer and spring cocoon rearing to take care of Korean needs in the future.

The forty-seven filatures in Korea are gradually being licensed and placed in operation.

It has been estimated that Korea can never compete with Japan or China in the production of silk before 1950, but the existing problems are being overcome so that by 1950 enough silk for export, as well as sufficient quantities for home consumption, will be manufactured.

power-to-weight ratios of many new cars. Compared with pre-war, the new models are large in the body and more comfortable, both as regards accommodation and riding. The seats are wide and lightly sprung, giving comfort, even on bad roads. Most cars have a central arm-rest for the rear seats. There is an increased use of the bench-type front seat accommodating three people, whose comfort is assisted by placing the gear lever on the steering column. Most of these bench seats are adjustable and rise as they are adjusted forwards.

Door handles on many cars are of the flush-fitting pull-out variety, or push-button. Many new models have hinged windows to give fresh air without draughts. A curved windscreen on some models is matched by a curved rear window. The majority of the new cars have one-piece lift-up type alligator bonnets. Lockers are much more commodious. The spare wheel in some models is hidden under the luggage. Many cars have disc or easy clean wheels while the new tyres have improved road gripping treads and the double inner-tube means that we come close to the life-saving "run-flat" tyre which proved very useful in the war zones.

There is great improvement in steering, which nowadays is very firm, yet light. Many models have T or Y spoked steering wheels. Often the central gear lever is replaced by control on the steering column, and the parking brake is operated from the dash, leaving the floor clear. The new engines are generally larger in power and lighter in weight. Nearly all of them are of the overhead valve type, offering a vastly improved performance. Their compression ratios are rather higher than pre-war.

DEVELOPMENTS IN MOTORCYCLE & BICYCLE INDUSTRY

Among developments noticed at the recent International Bicycle & Motor Cycle Show in London, was a new system of constructing bicycle frames by joining the tubes electrically without lugs. This means that the lug, which normally contains the end of the tube and supports the whole, can be dispensed with altogether. The innovation certainly makes for neatness in the appearance of the bicycle, and save both steel and time in manufacture. Only one operation is needed instead of five (as in the cast-lug system) and this operation takes 4½ minutes (compared with 25). The width of the tubes can also be reduced. Two pounds of steel can be saved on each bicycle—and this means two pounds less to push.

Light alloys are used so extensively in the new models that the only parts still exclusively of steel are spokes and ball-bearings. Weights have tumbled down. A combination of all the lightest fittings seen at the show would produce a sound bicycle weighing only some 13½ pounds. Even the

standard machine is appreciably lighter than it used to be owing to the more extensive use of light alloys.

Britain's new bicycles are brighter in colour than they used to be. Many more parts, too, are plated. Brakes are stronger and tyres "faster." Dynamo sets have a higher output.

Export demands have resulted in the production of many different types of cycle with specific features. The Raleigh group, for example, have to make over 500 different types, 90 kinds of frames, and from 1,500 to 2,000 different components.

The comfort of the rider has been given more attention by makers of both bicycles and motor-cycles. Lightweight motor-cycles of 98 cubic centimetres capacity and one-horse power are as simple to ride as a bicycle. Beside a variety of medium sized machines, there are also 1,000 c.c. designs, one of which is said to be the world's fastest standard motor-cycle. Some sidecars are exceptionally roomy; one can take an adult and three children, and another (for commercial use) is as big as a small van.

In 1938 manufacturers in Britain produced 1,500,000 bicycles, of which about 500,000 went overseas. Now Britain is making 2,750,000 bicycles a year of which 1,750,000 are exported. The cycle and motor-cycle industries of Britain are now holding first place in world production, compared with second place in 1938.

ADVANCE IN AVIATION INDUSTRY

Britain's new airliner, the Vickers Viscount, first four-engined civil transport in the world to be powered exclusively by airscrew-turbines, is designed to carry 32 passengers at high altitude in an air-conditioned, pressurised cabin over ranges of 1,500 nautical miles. All undercarriage units are retractable and when retracted they are fully enclosed by automatically operated doors. The flight deck and saloons are fully air-conditioned and pressurised, the pressure system permitting cruising at a maximum of 30,000 ft. with internal conditions equivalent to an outside altitude of 8,000 ft. From the safety point of view the Viscount is one of the world's most advanced airliners. There is full thermal de-icing. Double-slot-ed flaps permit safe landings in smaller airfields than those normally used by airliners.

A new kind of combustion chamber for jet aircraft is to be made in the United States under British licence. The new combustion chamber has been developed by Armstrong-Siddeley Motors of London (The Hyde, London, N.W.9) and incorporates a vapourising system which not only maintains a 100 per cent. combustion at high altitudes, but enables the turbine to be relit. By generating heat uniformly it also avoids distortion of the chamber. Britain's Ministry of Supply has helped to finance the development of the new jet-chamber.

The new series of tests with Britain's M.G.B. 2009, the first sea-going craft to be fitted with a gas turbine, is progressing satisfactorily. The first machinery, manufactured by Metro-

politan-Vickers Electrical Company Limited (Manchester, England), was destined to be tried for a period of not more than about 30 hours and then to be returned to the manufacturers' works for examination and overhaul prior to its installation for a second series of trials. The behaviour of the turbine at sea, however, was so satisfactory that the first trials were extended to 55 hours. Some salt was deposited on the blading but by washing the compressor with fresh water, the salt was dissolved and the performance unimpaired. The second phase of the trials is now in progress and will last until the engine has completed about 400 hours' total running.

A new synthetic resin adhesive, developed by Aero Research Limited, of Duxford, Cambridge, England, is being increasingly used in aircraft refuelling equipment. Refuelling in the air is done in the following way: first a "hauling" line, with a weight at its end, is trailed from the airliner to be refuelled. Then a contact line, fired from the tanker aircraft, engages the hauling line, and is wound in. This brings the end of the hauling line to the tanker. The hauling line is disconnected from the contact line, connected to the end of the hose and wound back to the airliner. It brings the hose with it, and when this connects both the aircraft refuelling can begin. The contact line container is subject to considerable stress when the line is shot out. It must therefore be of rigid construction. Soldering the brass plates was not satisfactory because of corrosion, so "Redux", the new synthetic resin adhesive, was used to bond the 37 corrugated brass plates in a honeycomb container. It has been found that this process is better than spot-welding or riveting the joints.

NEW RESEARCH AND PRODUCTS AND PROCESSES OF BRITISH INDUSTRIES

Meteors And Radar

Manchester University, England, has taken a pioneering share in founding a new branch of astronomy. At its research centre at Jodrell Bank in the English county of Cheshire, records are regularly made of infinitesimal particles entering the atmosphere. The burning of meteors gives rise to a trail of short-lived electrons. Small pieces of stone and iron in the meteor are burnt up by the gigantic friction of speeding through the atmosphere at up to 100,000 miles an hour. The light from the burning can only be seen at night, and then in favourable conditions. But the electrons will reflect back radio waves by day or night in practically all weather conditions. In this way the meteors' tracks can be "observed" — by an application of radar, in fact.

There is a meteor stream known to astronomers as eta-aquarids. Until recently it was believed to be small and of short duration. Recent observations by the Manchester radar astronomers have now shown it to be much more intense and lasting several months. Thus for the first time evidence was obtained of events which have been occurring for thousands of years.

These observations entailed measuring speeds of over 100,000 miles an hour in meteors which appeared without warning and disappeared almost instantaneously.

After a prolonged effort, two of the Manchester scientists succeeded in making the radio echo from the meteor operate an automatic recording device, which gave the locations of meteors every thousandth of a second as they swept through the aerial beam. No one yet knows whence these vast numbers of meteors come. It may well be that the Manchester astronomers will soon be able to place them, together with the comets, more satisfactorily in the evolutionary framework of the solar system, and then it will be known whether these strange bodies are primeval matter or the final disintegration of near neighbours in space.

The Bridge In The Tunnel

Research workers of Britain's National Physical Laboratory are investigating the reaction of suspension bridges when exposed to gales by using a 52-feet model of a bridge in a wind tunnel. These experiments are to determine the design for the proposed bridge over the River Severn, which flows through Wales and England, which will be the largest suspension bridge in Europe, and the third largest in the world.

The model is mounted on a turn-table so that it can be subjected to winds of 140 miles an hour from all quarters. It has been found that the construction of the bridge deck platform has a great effect on stability. A form of deck similar to the one used for the Tacoma Bridge in the United States proved unstable in a 40 miles-an-hour wind, in which the model began to "gallop". (The Tacoma Bridge collapsed in a 42 miles-an-hour wind in 1940). The suspension bridge to be built over the Severn will be able to withstand gales up to 140 miles an hour, though winds of such speeds have never been recorded in Britain.

Experiments have already proved that one of the causes of disaster to suspension bridges is the practice of stiffening the roadway with solid girders running the whole length. The bridge is much stronger when the solid girders are replaced by open latticed ones. Experiments have also shown that the effect of wind on a suspension bridge deck is analogous to its effect on an aircraft wing.

Tensile Strength of Cast Iron Trebled

The new nodular cast iron, produced in the laboratories of the British Cast Iron Research Association after long research, has so many advantages that experts are satisfied it will eventually supersede ordinary grey cast iron in a number of engineering applications. The new cast iron is made by adding to the molten metal a small amount of cerium. (Most lighter flints are 50 per cent. cerium).

The new process has increased the tensile strength of cast iron threefold. In World War I tensile strengths of about 15 tons a square inch were achieved. By World War II these had

been improved to about 25 tons a square inch. Iron treated with cerium now gives up to 80 tons a square inch—and the process requires no material change in foundry equipment.

All the raw materials required for making cast iron are available in Britain. The advantages of increased tensile strength; and the fact that variable sections can be made in one piece, and less machining is necessary—these will benefit the whole world.

Moreover, where a quick expansion of production is required, foundries can provide it without the danger of bottlenecks which may arise when materials have to be subjected to longer processes such as extrusion, pressing and forging.

Cast iron is now being used for making engine crankshafts. It has been found necessary to remove only three to ten per cent. of the cast weight in finishing processes, whereas in many forged steel shafts two-thirds to three-quarters of the original forgings have to be removed. The qualities of ordinary cast iron will be further improved by the use of the new nodular cast iron. Nodular cast iron is also easier to machine, strength for strength, so that saving should be possible in cutting tools, time, labour and overheads.

Photo-Typesetting

At the recently opened laboratories of the Printing Research Association at Leatherhead, Surrey, England, equipment has been temporarily installed to demonstrate a system of photo-typesetting, which dispenses with cast metal type. Its trade name is Rotofoto. The new method is a purely photographic process which should be useful in printing type by the lithography and gravure processes now widely used in the production of books and periodicals. The new system appears to be as cheap as standard printing practice; and it has the obvious advantage that the photographic master-copy of a book's typescript, from which reprints can be made, can be stored in a small space.

The Rotofoto equipment comprises a Monotype keyboard, a line-projector, and a make-up machine for producing paper proofs and film transparencies.

A punched paper record, similar in appearance to a small piano player roll, representing the "copy," is first made by a Monotype keyboard operator. This paper record is transferred to the line-projector, which contains the mechanism of the Monotype composition caster with the main difference that a photographic negative takes the place of the matrixes. The letters punched in the record are photographed on a roll of 35 millimetre cinematograph film carried in a camera under the type negative. After a full line has been completed the film is advanced, the distance depending on the space required between the lines, and the next line is photographed. The line-projector operates at about the same speed as a Monotype casting machine.

Reader's and authors' corrections are dealt with separately and contained in other rolls of films; the make-up machine operator introduces the corrected lines during the process of making a perfect photographic transparency of the type matter. The operations are simple and rapid, and produce transparencies of high fidelity. Any typeface can be employed by using the appropriate negative, and type sizes can be controlled by the magnification employed in the make-up machine. At present three negatives are used to cover the complete range of composition sizes.

Toughening Metal Surfaces

Experimental work carried out by Tilghman's Patent Sand Blast Company, Manchester, England, may result in increasing the life of machine parts tenfold. "Shot peening" the name of the process on which research is being carried out, improves fatigue life by pelting and so toughening metallic surfaces. Thus life of many working parts of cars can be extended more than tenfold by the new process. Several manufacturers are already shot peening such things as torsion bars, dynamo shafts, clutch springs and crankshafts. It has been found that shot peening also saves time in polishing, and even dispenses with it. One more recent application is in eliminating porosity in aluminium and other alloy die-castings.

"Vapour honing" is another process developed by this firm. In it fine abrasives in water or chemical emulsion are discharged against the metal surface to be treated. This reduces time spent in polishing and eliminates it for certain articles. In certain instances it is possible to plate direct on to a vapour-honed article, a technical achievement of considerable importance. Vapour honing is used to remove burrs from the eyes of needles, machine marks (before polishing) on the rotors of jet engines—and in fact, machine marks from a variety of articles.

Prototype machines applying the new processes are being tested by the Manchester firm of R. J. Richardson and Sons. In view of the advances that seem likely in the technique of casting, the new processes seem to have great possibilities.

Synthetic Linseed Oil

The main advantage of using linseed oil in paint and enamel is as a bonder. But linseed oil is scarce and the price usually high. Chemists in Britain have therefore been trying for some time to find a synthetic substitute, or partial substitute for it. After years of research the London paint manufacturing firm of Lewis Berger, 35 Berkeley Square, London, W.1., have produced a synthetic substance which they claim makes a substantial saving in linseed oil. The substitute is developed from styrene, which is produced from ethylene, in turn derived from crude oil or natural gas and benzene.

The new linseed oil substitute will shortly be available in commercial quantities. The firm of Petrochemicals Limited, who are building a plant at Partington, England, for the production of styrene from petroleum chemicals by a new process will provide the raw material for manufacturing the linseed substitute cheaply and in increased quantities. The styrene manufactured at Partington will be pumped to the plant where the linseed substitute will be manufactured. Many industries, in addition to the paint, enamel, and associated trades, should find the new agent of value.